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Professional Court Reporters (617) 423-0500
July 10, 1990

To:

DEPARTMENT OF JUSTICE
Attention: Donald G. Frankel, Esq.
Environmental Enforcement Section
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044

OFFICE OF THE ATTORNEY GENERAL
Attn: Deirdre H. Harris, Assistant
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MORRISON, MAHONEY & MILLER
Attention: Mark S. Granger, Esq.
250 Summer Street
Boston, Massachusetts 02210

Case Name: UNITED STATES OF AMERICA v. CHARLES
GEORGE TRUCKING COMPANY, INC., ET AL.;
COMMONWEALTH OF MASSACHUSETTS v.
CHARLES GEORGE TRUCKING COMPANY, INC.,
ET AL.

Name of Deponent(s): Charles P. Riley, Jr.
Date(s) Taken: June 29, 1990



Enclosed please find:

- () Original transcript () With signature page
(☒) Copy of transcript (☒) With original signature page
() ASCII disk () 5-1/4 () 3-1/2

Signature requirements:

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DEPARTMENT OF JUSTICE
Attention: Donald G. Frankel, Esq.
Environmental Enforcement Section
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044

Filing:

- (☒) Filing was waived () Filing was not waived
() Transcript to be filed by this office

Remarks:

Thank you for your cooperation.

Sincerely,

FRITZ & SHEEHAN ASSOCIATES, INC.



Deborah D. Fitzpatrick

encl.

cc: File

Charles B. Riley Jr

Charles P. Riley, Jr.

[illegible]

Subscribed and sworn before me this 24th day
of July, 1940. NOTARY PUBLIC [Signature]

Friday
Please L. Komarowski

Charles G. Riley Jr.



Volume: 1
 Pages: 1-211
 Exhibits: 1-18

UNITED STATES DISTRICT COURT
 DISTRICT OF MASSACHUSETTS

Civil Action No.: 85-2463-WD

UNITED STATES OF AMERICA,

Plaintiff,)

v.)

CHARLES GEORGE TRUCKING COMPANY, INC.,
 ET AL.,)

Defendants.)

Civil Action No.: 85-2714-WD

COMMONWEALTH OF MASSACHUSETTS,

Plaintiff,)

v.)

CHARLES GEORGE TRUCKING COMPANY, INC.,
 ET AL.,)

Defendants.)

DEPOSITION of CHARLES P. RILEY, JR.,
 taken on behalf of the Plaintiffs, pursuant to the
 applicable provisions of the Federal Rules of
 Civil Procedure, before Deborah L. Fitzpatrick,
 Registered Professional Reporter and Notary Public
 in and for the Commonwealth of Massachusetts, at
 the offices of Wynn & Wynn, 84 State Street,
 Boston, Massachusetts 02109, on Friday, June 29,
 1990, commencing at 9:35 a.m.

 FRITZ & SHEEHAN ASSOCIATES, INC.
 295 Devonshire Street, Boston 02110
 (617) 423-0500

1 PRESENT:

2 DEPARTMENT OF JUSTICE

3 Donald G. Frankel, Esq.
4 Environmental Enforcement Section
5 P.O. Box 7611, Ben Franklin Station
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35 Boston, Massachusetts 02110
36 for Charles George Trucking Company, Inc.
37 and Charles George, Sr.

1 PRESENT (Continued)

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20 84 State Street
 Boston, Massachusetts 02109
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21
22
23
24

I N D E X

WITNESS DIRECT CROSS REDIRECT RECROSS

CHARLES P. RILEY, JR.

BY MR. FRANKEL 6

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1
2 MR. FRANKEL: Before we begin, for
3 the record, there will be a stipulation for this
4 deposition that any objections made by counsel
5 representing a defendant or third-party defendant
6 will be applicable to all defendants and
7 third-party defendants present at the deposition.
8 And any objections made by counsel for one of the
9 plaintiffs, either the United States or the
10 Commonwealth of Massachusetts, will apply to the
11 other plaintiff.

12 The other stipulations are that the
13 deposition is being taken pursuant to the Rules of
14 Civil Procedure; except for objections to form,
15 other objections are not waived if not made at the
16 deposition.

17 MS. BECK: Reserving motions to
18 strike till time of trial, as well, and we'll read
19 and sign the deposition under pains and penalties
20 of perjury.

21
22 CHARLES P. RILEY, Sworn

23 DIRECT EXAMINATION

24 BY: MR. FRANKEL:

1 Q. Good morning, Mr. Riley.

2 A. Good morning.

3 Q. My name is Don Frankel, and I represent
4 the Plaintiff United States of America in this
5 action entitled United States vs. Charles George
6 Trucking Company, et al., No. 85-2463-WD pending
7 in the United States District Court for the
8 District of Massachusetts.

9 Would you please state your name and
10 address for the record?

11 A. Charles P. Riley, Jr., 1870 Grove Drive,
12 G R O V E, Northfield, Illinois,
13 N O R T H F I E L D, 60093.

14 Q. Do you understand that you're under oath
15 here today?

16 A. I do.

17 Q. If you have any difficulty understanding
18 any of my questions, please ask me to restate
19 them.

20 A. Fine.

21 Q. I'll try to do so for you.

22 Also, if you would like to take a break at
23 any point, please let me know and we'll break.

24 Do you have any other questions before we

1 begin?

2 A. No.

3 MR. FRANKEL: As a preliminary
4 matter, I'd like to note that this is a Rule
5 30(b)(6) deposition of Stepan Company, and I'd
6 like to have the court reporter mark as Exhibit 1
7 the 30(b)(6) notice of deposition that was issued
8 in connection with this deposition.

9 (Exhibit 1 marked for
10 identification).

11 MR. FRANKEL: I'd like to ask
12 counsel for Stepan whether he has been designated
13 for all fourteen of the subject matters listed in
14 the 30(b)(6) notice?

15 MS. BECK: Yes; to the extent there
16 is anyone available who can testify as to some of
17 these subject matters, Mr. Riley has been
18 designated.

19 MR. FRANKEL: Are there certain
20 subject matters for which he is unable to testify?

21 MS. BECK: The agreement between
22 Olin and Stepan, the agreement between National
23 Polychemicals and Stepan, Mr. Riley has some
24 knowledge as to the latter, but no knowledge as to

1 the former.

2 MR. FRANKEL: Are there any other
3 areas in the 30(b)(6) that he is not designated
4 for?

5 MS. BECK: No.

6 BY: MR. FRANKEL:

7 Q. Mr. Riley, did you meet with anyone in
8 preparation for this deposition?

9 MS. BECK: Objection.

10 I'm going to instruct him not to answer as
11 to his counsel.

12 Q. Anyone other than counsel?

13 A. No.

14 Q. Did you review documents with counsel in
15 preparation for the deposition?

16 MS. BECK: Objection.

17 I think that falls within the
18 attorney/client work product privilege.

19 MR. FRANKEL: I'm not going to ask
20 Mr. Riley which documents he reviewed. I'm merely
21 going to ask him if he reviewed documents.

22 MS. BECK: I don't think you can ask
23 him that. I think that's a privileged matter.

24 MR. FRANKEL: I don't agree with

1 that, but I'm going to move on.

2 BY: MR. FRANKEL:

3 Q. What is your educational background, Mr.
4 Riley?

5 A. Bachelor of science in chemistry, master
6 of science in chemistry.

7 Q. Where did you get your bachelor of
8 science in chemistry?

9 A. Lowell Technological Institute.

10 Q. What year did you get that degree?

11 A. 1954.

12 Q. And where did you get your master's in
13 chemistry?

14 A. Same institution.

15 Q. Could you tell me the nature of the
16 studies you did in connection with your master's
17 degree?

18 A. It was basically organic chemistry
19 applied to a textile-finishing application.

20 Q. Did you write any kind of dissertation in
21 connection with your master's degree?

22 A. A thesis.

23 Q. Could you tell me the subject matter of
24 your thesis?

1 A. It was as I just described it.

2 Q. Could you explain that to me again,
3 please?

4 A. Subject of the thesis was the addition of
5 certain types of chemicals to a fabric medium in
6 order to gain certain effects.

7 Q. Subsequent to your master's degree, did
8 you obtain any other degrees?

9 A. No.

10 Q. Have you taken any chemistry or science
11 courses since obtaining your master's degree?

12 A. Yes.

13 Q. Could you tell me what they were?

14 A. I took differential thermal analysis
15 around 1962.

16 Q. What is differential thermal analysis?

17 A. It's a technique of determining the
18 decomposition point of a material against a
19 standard reference.

20 Q. Where did you take this course?

21 A. Fairleigh Dickinson University in New
22 Jersey.

23 Q. Have you taken any other science or
24 technical courses?

1 A. I spent seventeen weeks at the Harvard
2 Business School in the program for management
3 development.

4 Q. When did you do that?

5 A. 1970.

6 Q. Any other courses that you haven't
7 mentioned?

8 A. It's hard to remember, but I have taken
9 various courses over the years.

10 Q. Have some of them been related to
11 chemistry?

12 A. Yes; advanced organic chemistry at one
13 time.

14 Q. Could you describe your employment
15 history starting with your first job after
16 obtaining your master's degree?

17 A. 1957 to 1967 I was employed in research
18 and development at National Polychemicals in
19 Wilmington, Massachusetts. 1967 to 19--

20 Q. Let me start with that period of
21 employment and then I'll move on to subsequent
22 periods.

23 You said you were in charge of research and
24 development, or working in that office?

1 A. I was working in research and
2 development.

3 Q. What type of research and development was
4 being done by National Polychemicals?

5 A. This was product and process development
6 to produce organic chemicals which had certain
7 applications as additives in rubber and plastics
8 processing.

9 Q. Were you working there as a scientist in
10 the research laboratory?

11 A. I was an organic chemist.

12 Q. When you started to work at National
13 Polychemicals in 1957, what was your title at
14 research and development?

15 A. It was research chemist.

16 Q. Did your title change from 1957 to 1967?

17 A. In 1964 I became the development manager,
18 which included supervising the laboratory and the
19 pilot plant staff.

20 Q. When you began work at National
21 Polychemicals in 1957, do you recall who your
22 immediate supervisor was?

23 A. Dr. Henry Hill, Ph.D.

24 Q. Do you know where Dr. Hill is today?

1 A. Dr. Hill is deceased.

2 Q. Did you receive any special training with
3 respect to the handling of hazardous wastes or
4 substances while you were employed by National
5 Polychemicals from 1957 to 1967?

6 MR. CHEFITZ: Objection.

7 MS. BECK: Objection.

8 Q. You can answer the question, please.

9 MS. BECK: Would you repeat the
10 question?

11 Do you want --

12 A. I have the question. You objected to it.

13 MS. BECK: You can answer it, if you
14 can answer it.

15 A. Yes. The training was by -- there were
16 various texts on hazardous wastes and its
17 properties and chemicals.

18 Q. Did you review those texts?

19 A. Yes.

20 Q. Do you know the names of some of those?

21 A. Sax, S A X; Dr. Sax was the number one
22 book of his time. Sax's hazardous compounds.

23 Q. Let me turn to the period after 1967;
24 what position did you take after working at

1 National Polychemicals?

2 A. 1967 to 1970 I was in manufacturing and
3 engineering at National Polychemicals.

4 Q. What was your title at manufacturing and
5 engineering?

6 A. Initially it was plant manager, and then
7 it was vice president for manufacturing and
8 engineering.

9 Q. How did this position differ from your
10 prior work in the research and development area of
11 the firm?

12 MS. BECK: Just hold that a minute.
13 Off the record.

14 (Discussion off the record).

15 A. This position was involved in directing
16 the manufacture of the products the company made,
17 as opposed to the research position.

18 BY: MR. FRANKEL:

19 Q. In connection with your position in the
20 manufacturing and engineering division, were you
21 familiar with the processes employed at the
22 Wilmington plant?

23 A. Yes.

24 Q. Did that include the raw materials used

1 to formulate your products?

2 A. Yes.

3 Q. Did that include the chemical processes
4 employed in order to reach --

5 A. Yes.

6 Q. Did that include the waste products or
7 by-products of the various processes that were
8 employed at the Wilmington facility?

9 A. It includes the by-products.

10 Q. Were you personally involved in
11 formulating some of the processes or developing
12 some of the processes used at the plant?

13 A. Yes, I was.

14 MR. FRANKEL: For the record, when I
15 say "plant," I'll be referring to the plant in
16 Wilmington, Massachusetts.

17 MR. CHEFITZ: Could you read that
18 question again.

19 (Whereupon, the court reporter read
20 a portion of the record).

21 BY: MR. FRANKEL:

22 Q. Turning to 1970, did your job position
23 change at that point in time?

24 A. In 1970 I became general manager for the

1 division. The company was now a business
2 department of Stepan from 1968 -- from the Stepan
3 acquisition, and I was chosen to be the general
4 manager of the business department in 1970.

5 Q. At the time that National Polychemicals
6 was purchased by Stepan Company, was it a
7 separately-incorporated subsidiary, or was it made
8 into a division of Stepan Company?

9 MR. FREDERICO: You're referring to
10 after the purchase was completed?

11 MR. FRANKEL: Yes.

12 A. After the purchase, it became a
13 department of Stepan when it was purchased.

14 Q. In 1968?

15 A. '68, yes.

16 Q. And could you tell me, again, what
17 position you took in 1970?

18 A. In '70 I became general manager for the
19 business department.

20 Q. How long were you general manager for the
21 business department?

22 A. Until 1976.

23 Q. During the time that you were general
24 manager for the business department, were you

1 still familiar with the processes employed by the
2 plant?

3 A. I was familiar, but not active with the
4 processes.

5 Q. Who during that period of time was
6 familiar with the chemical processes being
7 employed at the plant?

8 MS. BECK: Objection.

9 I believe he testified he was familiar.

10 Q. Who else besides yourself was familiar
11 with the chemical processes employed at the plant
12 during that period?

13 A. The plant manager was Ron McBrien.

14 Q. Was Mr. McBrien familiar with the
15 processes employed at that time?

16 A. Yes.

17 Q. Were there any other persons at the plant
18 during that period that were familiar with the
19 chemical processes that you can recall now?

20 A. There was a day-shift supervisor by the
21 name of Donald Court, C O U R T.

22 Q. Do you know where Mr. Court is now?

23 A. No, I don't.

24 Q. Do you know where Mr. McBrien is now?

1 A. Somewhere in the Boston area, I believe.

2 Q. Do you know where he's presently
3 employed?

4 A. No.

5 Q. Do you know where Mr. Court is presently
6 employed?

7 A. No.

8 Q. What position did you take in 1976?

9 A. 1976 I moved to Chicago and I became head
10 of manufacturing and engineering for Stepan
11 Company.

12 Q. How long did you hold that position?

13 A. I held it until 1980; I was appointed
14 vice president for the same duties and I'm still
15 doing it.

16 Q. What are the responsibilities of being
17 head of manufacturing and engineering?

18 A. Coordinate the activities of seven
19 manufacturing plants in North America producing
20 the company's products. Provide for engineering
21 for new processes and new facilities.

22 Q. As head of engineering, are you involved
23 in the scientific, chemical processes involved in
24 the various manufacturing plants?

1 A. Yes.

2 Q. Let me take you back to your testimony
3 concerning the period from '57 to 1967, when I
4 believe you stated you were at National
5 Polychemicals.

6 Did National Polychemicals have an
7 individual in charge of environmental affairs?

8 A. No one had that title.

9 Q. Were there any particular employees that
10 had that responsibility?

11 MR. CHEFITZ: At what time period
12 are we talking about?

13 MR. FRANKEL: 1957 to '67.

14 A. It was shared by the laboratory people
15 and the management of the plant -- the people with
16 technical degrees shared this responsibility.

17 Q. Who was the president of National
18 Polychemicals?

19 A. A gentleman by the name of Edward Osberg,
20 O S B E R G.

21 Q. Was he president during that entire
22 period of time from 1957 to 1967?

23 A. Yes, he was.

24 Q. Do you know where he's located today?

1 A. He's retired somewhere in Florida. He's
2 been there since '72.

3 Q. Could you describe for me the plant
4 located in Wilmington? Is it a large operation?

5 MS. BECK: Objection.

6 MR. FREDERICO: At what period of
7 time?

8 MR. FRANKEL: At the period from
9 1957 to 1967.

10 MS. BECK: You want a physical
11 description of the facility?

12 MR. FRANKEL: Yes.

13 MS. BECK: If you can.

14 A. It's a site of fifty acres.

15 Q. Fifty?

16 A. Yes; about fifteen were developed with
17 the plant site. There were various buildings
18 where the products were made. There was an office
19 building, a research lab.

20 Q. How many employees, approximately, worked
21 at the National Polychemicals facilities in
22 Wilmington during that period of time?

23 A. In the period of '57 to --

24 Q. Let's say late '66, '67, that time

1 period.

2 A. Sixty-six; it would be roughly ninety to
3 a hundred people there, including the Fisons
4 Corporation people who were in the office
5 building.

6 Q. Did there come a time when National
7 Polychemicals Corporation was purchased by Stepan
8 Chemical Company?

9 A. It was purchased in 1968.

10 Q. Can you tell me the general terms of the
11 transaction?

12 MS. BECK: Objection.

13 There is a contract. I think it speaks for
14 itself.

15 MR. FREDERICO: Objection.

16 MR. CHEFITZ: I would make the same
17 objection on the basis of time.

18 Q. Can you answer the question, Mr. Riley,
19 in general terms?

20 A. I can answer only that it was purchased
21 and it became a department of Stepan.

22 MR. FRANKEL: I'd like to mark as
23 Exhibit 2 an agreement entered into on September
24 18, 1968 by and between Stepan Chemical Company,

1 Fisons Corporation, and Fisons, Limited.

2 (Exhibit 2 marked for
3 identification).

4 Q. Have you had a chance to review that, Mr.
5 Riley?

6 A. I didn't know you were offering it.

7 MS. BECK: You're not going to ask
8 him to interpret provisions of this contract?

9 MR. FRANKEL: I am not going to do
10 that.

11 Q. (Handing).

12 A. (Witness peruses document).

13 Q. I was going to ask the witness if he
14 could identify whether or not this was, in fact,
15 an agreement entered into by Stepan Chemical?

16 A. I have no way of knowing.

17 Q. You don't know?

18 A. I don't know.

19 Q. Were you involved in the transaction?

20 A. No, not in the writing of the contract.

21 Q. Can you tell me who at National
22 Polychemicals was involved in the transaction?

23 A. He's Fisons Corporation; Jon Slaven is
24 Fisons.

1 THE WITNESS: Can you read that
2 (indicating)?

3 MS. BECK: No.

4 Q. Let me ask you who are the individuals
5 who signed the contract on Page 25?

6 A. W. Meier was the vice president and
7 treasurer for Stepan Company. He still is. Jon
8 Slaven was an executive with Fisons' International
9 Department at the time. He may have also had
10 duties with Fisons Corporation. I'm not sure of
11 that.

12 Then the last one, I don't recognize who
13 that is. I don't know who that signature is.

14 Q. Can you tell me which individuals at
15 National Polychemicals were involved in
16 negotiating this agreement?

17 A. I think the agreement was negotiated with
18 Fisons.

19 Q. Can you tell me who at Fisons?

20 A. Jon Slaven, S L A V E N, first name,
21 J O N.

22 Q. Do you know where he is?

23 A. No, I don't. I have no idea where he is.

24 Q. Do you know of any other persons from

1 Fisons Corporation that were involved in the
2 transaction?

3 A. No.

4 Q. How about other individuals from the
5 Stepan Chemical Company?

6 A. There was Quinne Stepan, Jr.

7 Q. Do you know where he is today?

8 A. He's in Chicago -- in Northfield,
9 Illinois.

10 Q. Any other individuals from Stepan?

11 A. No.

12 His name is F. Quinne Stepan, by the way;
13 Q U I N N E.

14 Q. Mr. Riley, on Page 2 of the agreement it
15 refers to an Exhibit X which is supposed to list
16 the products produced by National Polychemicals at
17 the time of the closing. I didn't see an Exhibit
18 X attached to the agreement when I reviewed it.
19 Are you familiar with this exhibit?

20 A. No. I'm not familiar with this contract.

21 MR. FRANKEL: I would just note for
22 the record that this is a 30(b)(6) deposition, and
23 the transaction between National Polychemicals and
24 Stepan Company in 1968 is one of the subject

1 matters listed in the 30(b)(6) notice, and I
2 request that Stepan Company designate another
3 individual who is familiar with the transaction in
4 order to testify in connection with the 30(b)(6)
5 deposition.

6 MS. BECK: Let me just put on the
7 record at this point that I have made Mr. Frankel
8 aware of the fact that I objected to the paragraph
9 of the 30(b)(6) notice which requests somebody who
10 is familiar with the National Polychemicals and
11 Stepan sale as being overly broad so that it was
12 impossible to know who he wanted to depose. I
13 asked Mr. Frankel to narrow the framework of that
14 request and he did not.

15 MR. FRANKEL: Again, for the record,
16 I believe that I telecopied a draft of the
17 30(b)(6) notice to counsel for Stepan, and in that
18 notice there was a paragraph relating to the
19 purchase of National Polychemicals by Stepan
20 Company. Counsel for Stepan did ask me to narrow
21 or further define the areas that I wished to cover
22 in the deposition, and when I sent out the formal
23 notice of deposition, I listed four particular
24 subcategories under Category 11 that I wished to

1 address in the 30(b)(6) deposition.

2 So I believe it's fairly clearly listed,
3 but I'll move on from here and won't belabor the
4 point.

5 BY: MR. FRANKEL:

6 Q. Mr. Riley, are you familiar with how
7 Stepan paid for the shares of National
8 Polychemicals?

9 A. No.

10 Q. Are you familiar with the purchase price?

11 MS. BECK: Objection.

12 It's all in the contract. The contract
13 speaks for itself. You're asking him now to read
14 the contract and interpret it and I'm not going to
15 allow him to do that.

16 Q. Based upon your knowledge, other than
17 looking at the contract, are you aware of the
18 general terms of the transaction?

19 A. From reading the contract now?

20 Q. Without reading the contract now.

21 A. No.

22 MR. FRANKEL: I'd like to mark as
23 Exhibit 3 a license agreement entered into on
24 September 28, 1968 by and between Stepan Chemical

1 Company, Fisons Corporation and Fisons, Limited.

2 (Exhibit 3 marked for
3 identification).

4 Q. I would ask the witness to take a look at
5 that agreement (handing).

6 A. (Witness peruses document).

7 Q. Have you had a chance to look at that
8 document?

9 A. Yes.

10 Q. Can you tell me whether or not this is a
11 license agreement that was entered into by Stepan
12 Chemical Company?

13 A. This was an option that was offered by
14 Fisons which was not taken up by Stepan. It was
15 an option on a process.

16 Q. Stepan did not exercise this option?

17 A. That's right.

18 Q. Mr. Riley, immediately prior to this sale
19 transaction in 1968, can you tell me who the
20 officers of National Polychemicals were?

21 A. Edward Osberg was the president. I was
22 the vice president of manufacturing and
23 engineering. There was a Richard Strauss who was
24 the vice president. I'm in the wrong -- Strauss

1 wasn't there at that point.

2 MS. BECK: You have to speak up.

3 A. Strauss was not there.

4 Those were the only officers I recall.

5 Q. Did you previously testify that
6 immediately subsequent to the sale, that National
7 Polychemicals became a division of Stepan?

8 MS. BECK: I believe he said
9 department.

10 A. No. I said, department.

11 Q. It became a department?

12 A. A business department.

13 Q. Could you tell me what a business
14 department --

15 A. Stepan is organized in a matrix
16 organization whereby all product lines are handled
17 by certain business departments. Manufacturing is
18 done by other people who report directly into the
19 chairman of the company. The selling of the
20 materials, research and development, is done
21 through these business groups, and these people
22 report in to the chairman.

23 Q. So after the transaction in 1968, did the
24 Wilmington plant report to Stepan headquarters?

1 A. Yes.

2 Q. Who at Stepan headquarters oversaw the
3 operations of the Wilmington plant?

4 A. I think I've confused myself. That
5 didn't happen till 1971, that manufacturing
6 reported. For the first three years, Stepan did
7 not have a matrix organization, so the
8 manufacturing in Wilmington reported to the
9 president of National Polychemicals. There was a
10 president there until 1970. After 1970 that
11 happened.

12 Q. After 1970 --

13 A. Yes, '71. And the plant reported to
14 Howard Zeh, Z E H, who was the first corporate
15 manufacturing manager.

16 Q. During the initial period of time from
17 1968 through 1970, did you just testify that there
18 was a president of National Polychemicals?

19 A. Yes.

20 Q. Does that mean that National
21 Polychemicals was not a department of Stepan at
22 that time?

23 A. No. It was a department, but he held the
24 title as president.

1 Q. Do you know who he reported to at Stepan?

2 A. He reported to the chairman of Stepan,
3 Alfred C. Stepan, Jr.

4 Q. Directly to the chairman?

5 A. Yes.

6 Q. Did the chairman have the ultimate
7 authority concerning the manufacturing processes
8 at the plant?

9 MS. BECK: Objection.

10 I think this goes beyond the scope of the
11 30(b)(6) notice.

12 MR. FREDERICO: You're limiting
13 these questions to the time after the sale to
14 Stepan?

15 MR. FRANKEL: Yes. I believe it is
16 covered by -- the 30(b)(6) notice I believe covers
17 the relationship of National Polychemicals and
18 Stepan Company after the purchase in 1968.

19 MS. BECK: You can testify to what
20 you know to, but don't guess, if you don't know.

21 A. Well, the line -- the chain of command
22 was, the manufacturing reported to the president
23 in Wilmington and he reported to the chairman of
24 Stepan.

1 Q. And that was as of 19- -- after the
2 purchase in 1968?

3 A. Yes.

4 Q. Other than the plant in Wilmington, do
5 you know what other assets National Polychemicals
6 had prior to the sale?

7 A. That's the only asset I'm aware of.

8 Q. So essentially National Polychemicals was
9 the Wilmington plant?

10 MS. BECK: Objection.

11 You can answer if you can.

12 A. As far as I know. I know of no other
13 assets.

14 Q. After the 1968 sale, did the Wilmington
15 plant continue to produce the same -- essentially
16 the same products as it had produced prior to the
17 sale?

18 A. Essentially, yes.

19 Q. Focusing now on after the sale in 1968,
20 during the late sixties, could you tell me the
21 type of products that were produced by the
22 Wilmington plant?

23 A. The general type was additives for rubber
24 and plastics.

1 Q. What are additives for rubber and
2 plastics?

3 A. Additives are materials that are added to
4 polymers or elastomers to effect the final product
5 and enhance the properties of the polymer and so
6 forth.

7 Q. What are polymers?

8 A. Polymer comes from -- the Greek word
9 meros is part, and the Greek word poly is many.
10 So polymer is many parts that have been strung
11 together to make a high molecular weight and give
12 you certain properties.

13 Q. Would those polymers be found in rubber
14 and plastics or just one or the other?

15 A. Those are elastomers rather than
16 polymers.

17 Q. What is an elastomer?

18 A. Elastomeric material is a material that
19 has the properties of elasticity that can be
20 stretched and flexed and it will return to its
21 original shape.

22 Q. Can you tell me the names of the specific
23 products that were produced, other than in general
24 terms?

1 A. Yes. I'll say the word first and then
2 spell it for you.

3 One key product was dinitrosopentamethylene
4 tetramine,
5 D I N I T R O S O P E N T A M E T H Y L E N E, the
6 second word is tetramine, T E T R A M I N E. So
7 that's what we called the trivial name of that
8 material. If you want the chemical name, it's
9 1,5-dinitroso, 1,3,5,7-tetra aza cyclooctane; 1, 5
10 now, word, D I N I T R O S O, then 1, 3, 5, 7, and
11 then, tetra, T E T R A, aza, A Z A, a final word,
12 C Y C L O O C T A N E, cyclooctane.

13 This was a foaming agent for elastomers
14 such as natural and synthetic rubber. It was used
15 to create sponge rubber for soling -- shoe soling.

16 Our second major product line was
17 azobisformamide, A Z O B I S F O R M A M I D E,
18 azobisformamide, also called azodicarbonamide,
19 A Z O D I C A R B O N A M I D E, azodicarbonamide;
20 again, this is a foaming agent for rubber and
21 plastics.

22 Q. Let me take you back to the first
23 substance, first product that you mentioned.

24 A. Do you wants to pronounce it?

1 Q. Dinitropentamethylene?

2 A. No; dinitrosopentamethylene.

3 Q. Dinitrosopentamethylene. I'll refer to
4 it as Product No. 1?

5 A. All right. We used to call it Product A.

6 Q. I can see why.

7 Q. What were the raw materials used to
8 produce Product No. 1?

9 A. One word, hexamethylenetetramine.

10 H E X A M E T H Y L E N E T E T R A M I N E,

11 hexamethylenetetramine; sodium nitrite,

12 N I T R I T E; hydrochloric acid.

13 Q. Any others?

14 A. No.

15 Q. Could you describe to me the waste
16 products or by-products of the process used to
17 produce Product 1?

18 A. This process consisted of reacting the
19 hexamethylenetetramine, which is an organic
20 compound, in an aqueous system, a water system,
21 with hydrochloric acid and sodium nitrite. The
22 desired product, Product A, precipitated as a
23 solid and it was recovered by filtration. The
24 filtrate contained sodium chloride.

1 Q. What do you mean by the filtrate?

2 A. The filtrate is the liquid that goes
3 through the filter when you filter off a product,
4 a solid. What is left over is a solution called
5 the filtrate. It is what is not filtered out on
6 the filter.

7 Q. So to be sure I understand here, the
8 three ingredients -- I assume there was some sort
9 of chemical reaction between the ingredients?

10 A. Yes.

11 Q. And the end products were Product 1 and
12 sodium chloride?

13 A. Yes.

14 Q. And water?

15 A. Water was present.

16 Q. Was there any sodium nitrite in the
17 by-products?

18 A. There may have been a small amount.

19 Not --

20 Q. I'm sorry?

21 A. One to two percent.

22 Q. One to two percent sodium nitrite?

23 A. But that couldn't exist in the
24 by-products for very long, because it would be

1 reacted with the hydrochloric acid to sodium
2 chloride, so the nitrite couldn't exist in this
3 system very long because it's a low pH system.

4 Q. Does that mean that the filtrate had no
5 sodium nitrite in it, whatsoever, or only small
6 amounts?

7 A. It might have had a small amount, a trace
8 amount, less than one percent. But then, when
9 this was combined with other systems that were
10 acidic, it would be converted to sodium chloride
11 because the other processes, we combined all our
12 filtration streams in Wilmington, and when we had,
13 we had a low pH stream. And at that point, sodium
14 nitrite has to go to sodium chloride, and it gives
15 off oxides of nitrogen.

16 Q. Was there any hydrochloric acid left in
17 the filtrate?

18 A. There would have been some.

19 Q. What did the Wilmington plant do with
20 this filtrate? Where did it go, so to speak?

21 A. At what point in time?

22 Q. Immediately after the manufacturing
23 process was completed, what happened to the
24 filtrate at that point?

1 MS. BECK: What dates are we talking
2 about?

3 MR. FRANKEL: Let me start with the
4 late 1960s, and you can tell me if the methodology
5 changed over time.

6 MR. FREDERICO: Can you be more
7 precise than that? There was a sale in 1968. By
8 late 1960s, do you mean after or before?

9 MR. FRANKEL: I'm talking about
10 subsequent to the sale.

11 A. Subsequent to the sale, the filtrates
12 were combined and were run into dug-out areas in
13 the plant. They were lagoon-type areas. In 1968,
14 the company agreed to a compliance order with the
15 Department of Environmental Quality to build a
16 waste treatment plant. There was an extension of
17 an MDC sewer involved, to which this waste
18 treatment plant effluent would go. So the
19 compliance order was roughly after the sale in '69
20 -- early '69. The treatment plant was built by
21 some time in '70, '71.

22 Q. To be sure I understand your testimony,
23 are you saying that in 1968 the -- did you call it
24 wastewater?

1 A. Yes.

2 Q. Was sent into lagoons located on the
3 property of the Wilmington plant?

4 A. Right.

5 Q. And at some point in the early 1970s, are
6 you saying that that wastewater was sent to a
7 wastewater treatment plant located at the
8 Wilmington plant?

9 A. A treatment plant was constructed under a
10 compliance order with the Department of
11 Environmental Quality of the Commonwealth, and the
12 company began treating the waste.

13 Q. So it was placed into lagoons up until
14 the time when the plant went into operation?

15 A. The material -- it ran into these dug-out
16 areas, and then it sort of disappeared. There
17 wasn't material sitting there.

18 Q. Do you know what the pH of the filtrate
19 was for this first product, Product 1?

20 A. Roughly or generally?

21 Q. Generally.

22 A. At the end of the reaction, it was around
23 5, 5 to 6.

24 Q. After this filtrate was sent into the

1 lagoons, was there any further treatment of it by
2 the Wilmington plant?

3 A. There was some lime added to the lagoons
4 -- limestone.

5 Q. Do you know what the percent of the total
6 suspended solids was in the filtrate?

7 A. It would have been very low because the
8 organic products had been taken out, so it would
9 have been nil. This was a clear material.

10 Q. After the wastewater treatment plant went
11 into operation -- did you say that was around 1971
12 or 1972?

13 A. I think '70, '71; in that period.

14 Q. What was the -- could you tell me how the
15 wastewater treatment plant worked, in general
16 terms?

17 A. Yes. The problem at Wilmington was a low
18 pH material coming off the azobisformamide
19 process. That had a very low acid material coming
20 out. These streams were combined, and they were
21 subjected to neutralization with lime, actually
22 hydrated lime, which is calcium hydroxide.

23 Q. At the wastewater treatment plant?

24 A. Yes.

1 So the streams were taken into an
2 equalization tank where everything was mixed up
3 and then lime was added. A lime solution was
4 added until the pH came up to 6 to 9. And now in
5 the early days of the plant, the plant was
6 started, the lime -- the product of the
7 neutralization, calcium sulfate or gypsum was
8 filtered from the stream. The stream was actually
9 put through a filter; a filter cake was taken off.

10 After a certain period of time, another
11 method of disposing of the system there, lagoons
12 created on the site, and instead of filtering the
13 cake, what we called the slurry, the neutralized
14 slurry with the gypsum and the liquid were sent to
15 the lined lagoons and the calcium sulfate was
16 allowed to settle and the liquid was pumped off
17 and sent to the sewers. And these lagoons were
18 periodically dried out, all the liquid taken off,
19 and the calcium sulfate was taken to a landfill,
20 which was permitted at the back of the National
21 Polychemical property, which was adjacent to the
22 Woburn dump. This was an approved landfill by the
23 DEQ for the calcium sulfate.

24 I said a lot in that statement.

1 Go ahead.

2 Q. Let me take you back to the time period
3 when you began treating the effluent with the
4 wastewater treatment plant. I believe you said
5 1971 or so?

6 A. Yes, roughly.

7 Q. How long a period of time did you use a
8 filtering process to remove the calcium sulfate
9 from the sludge?

10 A. Probably two to three to four years; some
11 period like that.

12 Q. Do you know what the Wilmington plant did
13 with the calcium sulfate that it removed from the
14 sludge?

15 A. It came off the filter, which was a
16 rotary vacuum filter, and into a dumpster and it
17 was taken away.

18 Q. Do you know where it was taken?

19 A. No. I don't.

20 Q. Do you know what company was employed by
21 the Wilmington plant to take --

22 A. Charles George took it away.

23 Q. That is the Charles George Trucking
24 Company?

1 A. Yes.

2 Q. Is it your testimony that you don't know
3 where the Charles George Trucking Company took the
4 calcium sulfate?

5 A. That is correct.

6 Q. Is the calcium sulfate synonymous with
7 gypsum cake?

8 A. Yes.

9 Q. Do you know how much gypsum cake was
10 produced by your wastewater treatment plant on a
11 daily basis during this period of time?

12 A. I don't know at this point.

13 MR. CHEFITZ: What do you mean by,
14 "this period of time?"

15 MR. FRANKEL: When I said, "this
16 period of time," I meant the period of years
17 during which the Wilmington plant was using the
18 wastewater treatment plant and filtering out the
19 gypsum cake from the sludge.

20 MR. CHEFITZ: Thank you.

21 BY: MR. FRANKEL:

22 Q. I believe you said that was a three- to
23 four-year period in the early 1970s?

24 A. Yes.

1 MS. BECK: Two, to three, to four
2 years, I think he said.

3 THE WITNESS: Yes.

4 Q. How often was the filter cake placed in
5 these dumpsters that you've previously referred
6 to?

7 A. How often was the cake -- it was a
8 continual process. It was done every day.

9 Q. Let me ask you again, do you know
10 approximately the volume or amount of filter cake
11 on a daily basis?

12 A. I think I recall that it was like a
13 container per week, or something like that.

14 Q. How big was a container?

15 A. I don't recall.

16 Q. Do you know how many tons per week?

17 A. No, I don't.

18 Q. Would it have been more than one ton?

19 A. Yes.

20 Q. Would it have been hundreds of tons?

21 A. No; but I don't know the...

22 Q. Do you know what other substances -- let
23 me back up.

24 Let me turn to Product 2 that you

1 mentioned, which was the azobisformamide,
2 azodicarbonamide?

3 A. Azodicarbonamide.

4 Can you tell me the manufacturing process
5 used to produce this product, which I'll refer to
6 as Product 2?

7 A. It's made from hydrazine,
8 H Y D R A Z I N E, urea, and sulfuric acid, and
9 sodium chlorate, C H L O R A T E.

10 Q. Could you tell me in general terms what
11 the chemical reaction was that produced Product 2?

12 A. It's a condensation between urea and
13 hydrazine with an oxidation by sodium chlorate.

14 Q. What were the by-products of this process
15 other than the product that you were producing?

16 A. By-products would be sodium sulfate, some
17 sodium chloride, and ammonium sulfate.

18 Q. I'm sorry, sodium sulfate, ammonium
19 sulfate and what was the other?

20 A. Sodium chloride.

21 Q. Were there any other substances in the
22 waste material?

23 A. No.

24 Q. What did the Wilmington plant do with

1 this waste stream?

2 A. At what period?

3 Q. Immediately after the purchase of the
4 plant by Stepan.

5 A. In 1968 it was being run to these pits in
6 the ground to which lime was added at that point.

7 Q. At the time your wastewater treatment
8 went into operation, did you begin to send this
9 effluent to that wastewater treatment plant?

10 A. Yes.

11 Q. Just as you testified previously
12 concerning Product 1?

13 A. It was mixed. It was combined with the
14 effluent from Product 1.

15 Q. Do you know if there was any ammonia as a
16 by-product of this process?

17 A. In the waste stream?

18 Q. Yes.

19 A. No; there couldn't be because it was a
20 very strong sulfuric acid stream. Ammonia would
21 have to be combined as ammonium sulfate.

22 Q. How about hydrochloric acid?

23 A. The hydrochloric -- there could be a
24 small amount of hydrochloric. This is before

1 neutralizing?

2 Q. Before neutralizing, right.

3 A. Before neutralizing. No. It would all
4 be sodium chloride.

5 Q. Was there any sulfuric acid?

6 A. Yes.

7 Q. What other products were produced by the
8 Wilmington plant?

9 A. Another major product group was called
10 tris nonylphenyl phosphite, three words, T R I S,
11 nonylphenyl, N O N Y L P H E N Y L, and the third
12 word, phosphite, P H O S P H I T E; tris
13 nonylphenyl phosphite.

14 Q. What is tris nonylphenyl phosphite?

15 A. This is an additive for rubber and
16 plastics that prevents degradation by oxidation of
17 air and so forth.

18 Q. What were the raw materials used to
19 produce --

20 A. It's made by phosphorus trichloride and
21 nonyl phenol.

22 Q. Any other raw materials?

23 A. No.

24 Q. What were the by-products?

1 A. The by-product is a gas, hydrogen
2 chloride; which was absorbed in a water solution
3 and recovered as hydrochloric acid in Wilmington.

4 Q. What did the Wilmington plant do with the
5 hydrochloric acid?

6 A. It was sold on the outside.

7 Q. Were there any other by-products other
8 than the water and the hydrochloric acid?

9 A. No.

10 Q. So is it fair to say that the waste
11 by-products from Product 3 did not go into the
12 same waste stream as the by-products for Products
13 1 and 2?

14 A. That's right. There was no entry to
15 that.

16 Q. What other products were being produced
17 by the Wilmington plant in 1968?

18 A. We're getting to some smaller products
19 and it's hard to recall. There was one other
20 product line that was -- was an anti-oxidant
21 called dioctyl, D I O C T Y L, diphenylamine,
22 D I P H E N Y L A M I N E. This was an
23 anti-oxidant for rubber.

24 Q. What were the raw materials used to

1 produce the dioctyl diphenylamine?

2 A. Diphenylamine and diisobutylene,
3 D I I S O B U T Y L E N E, and an aluminum
4 chloride catalyst was used.

5 Q. What were the waste products in
6 connection with this process?

7 A. The only waste basically was aluminum
8 hydroxide.

9 Q. When you say, "basically," were there
10 other wastes in small amounts?

11 A. No. No, because the other materials were
12 recovered and used again in the process. Anything
13 that wasn't reacted was recovered.

14 Q. What happened to this aluminum hydroxide
15 waste?

16 A. It went into the general chemical sewer.

17 Q. So it did not go to the lagoon?

18 A. At what period?

19 Q. Let me first ask you about the period
20 from 1968 until start-up of the wastewater
21 treatment plant. You testified previously --

22 A. I don't think it was being made in 1968.
23 Production had ceased by then. I think I gave you
24 a product that wasn't being made in 1968.

1 Q. I was only asking you for products as of
2 '68?

3 A. Take that away, then. It's an older
4 product. My memory is confused between '57 and
5 '76.

6 Q. Okay; but the three products that you
7 mentioned earlier --

8 A. They were all being made, and they were
9 the key reactions that were running in the company
10 at that time.

11 Q. How long did the company continue to
12 produce the first three products that you
13 mentioned?

14 A. As far as I know, through 1976 they were
15 still producing them.

16 Q. All three of those?

17 A. Yes, and they were being still produced
18 in 1980, I believe.

19 Q. Any other products as of 1968?

20 A. No. There weren't any other reactions.

21 MR. FRANKEL: Why don't we take a
22 brief break.

23 (Whereupon, a brief recess was
24 taken).

1 CONTINUED DIRECT EXAMINATION

2 BY: MR. FRANKEL:

3 Q. Mr. Riley --

4 MR. FRANKEL: Back on the record.

5 Q. -- before the break I asked you whether
6 there were any more products being produced by the
7 Wilmington plant in about 1968; you said, no
8 further reactions. What did you mean by that?

9 A. These were the main products that were
10 made by reactions.

11 Q. Were there other minor products that were
12 also made?

13 A. There would have been, but I don't
14 remember. I don't recall. These were the main
15 chemical operations that were running at that
16 site.

17 Q. Moving further into the early 1970s,
18 would your answer be the same with respect to the
19 products?

20 A. Yes.

21 Q. How about the mid-1970s?

22 A. The same products were being made.

23 Q. And no additional products?

24 A. No.

1 Q. How about the late 1970s?

2 A. There was one other product added around
3 1970. There was one other product.

4 Q. What product was that?

5 A. Let me figure it out.

6 4,4' oxy bisbenzene di sulfonylhydrazide;
7 4, 4 prime, O X Y, second word,
8 B I S B E N Z E N E, another word, di, D I, and
9 then a last word,
10 S U L F O N Y L H Y D R A Z I D E. That should
11 all say 4,4' oxy bisbenzene di sulfonylhydrazide.

12 Again, this is another foaming agent for
13 rubber and plastics. And it's made from hydrazine
14 diphenyl oxide, D I P H E N Y L, second word,
15 oxide, O X I D E, and chlorosulfonic acid,
16 C H L O R O S U L F O N I C, chlorosulphonic,
17 acid.

18 Q. Any other raw material?

19 A. No.

20 Q. How about the waste products of this?

21 A. Waste products here again are sodium
22 chloride, sodium sulfate and there would be some
23 sulfuric acid in the system.

24 Q. Can you tell me how much sulfuric acid?

1 A. No. I don't recall, but there would be
2 some sulfuric. It was a low pH stream, and again,
3 this stream was taken and combined with the other
4 streams, and when the neutralization plant was
5 running, all of this was neutralized with a lime
6 solution.

7 Q. During what period of time did the
8 Wilmington plant produce, I'll call it, 4-prime?

9 A. Four-prime was produced probably from '70
10 until I left in '76 it was still being produced.

11 Q. Are there any other products?

12 A. No.

13 Q. Let me be sure I understand your
14 testimony concerning the waste streams. Is it
15 fair to say that during the period of time prior
16 to implementation of the wastewater treatment
17 plant, all of the effluent went into lagoons or
18 ditches?

19 A. Yes.

20 Q. Did the Wilmington plant remove any
21 material from those lagoons at any time --

22 A. No.

23 Q. -- to be taken off site?

24 A. No.

1 Q. During that period of time prior to
2 start-up of the wastewater treatment plant, did
3 the Wilmington plant do anything else with its
4 wastes other than putting them into the lagoon?

5 A. No.

6 Q. Did it have general office waste and
7 trash or paper waste, that type of thing?

8 A. Yes; as different from chemical waste.

9 Q. Do you know what it did with that other
10 type of waste?

11 A. There were dumpsters located in the yard
12 in the plant and office waste was placed in those,
13 as well as scrap metal from the maintenance
14 department, scrap pipe; materials such as that.

15 Q. Where were those dumpsters located?

16 A. They were at various locations in the
17 plant facilities.

18 Q. Was any chemical waste placed in those
19 dumpsters?

20 A. Not to my knowledge.

21 Q. Was any laboratory waste placed in those
22 dumpsters?

23 A. Not to my knowledge.

24 Q. Who transported those containers off

1 site?

2 MR. FREDERICO: During what period
3 of time?

4 A. Charles George Trucking.

5 MR. FRANKEL: Let me start with the
6 period after the sale in 1968.

7 Q. Who transported those dumpsters after the
8 sale in 1968?

9 MS. BECK: You mean physically
10 removed them from the site? Were they physically
11 removed from the site?

12 A. You mean who picked up the trash?

13 MR. CHEFITZ: When you say after
14 1968, for what time period?

15 MR. FREDERICO: After the --

16 MR. FRANKEL: Let me clarify.

17 Q. Did you testify that there were dumpsters
18 located on site?

19 A. Yes. And these dumpsters were the type
20 that a trash truck comes in, picks it up, dumps it
21 into the truck and then leaves the empty dumpster
22 and the truck goes away.

23 Q. Who picked up the trash in those
24 dumpsters?

1 A. As I remember, Charles George Trucking.

2 Q. During what period of time did Charles
3 George Trucking pick up that trash? What was the
4 first year?

5 A. In the plant?

6 Q. Yes.

7 A. I don't know when it started. It had to
8 be in the late fifties.

9 Q. Do you know when it ended?

10 A. I have no idea.

11 Q. Was it before or after the time that you
12 left the Wilmington plant in 1976?

13 A. I have no knowledge of whether he was
14 still picking it up when I left.

15 Q. Was he picking -- was the Charles George
16 Trucking Company picking up this trash in the
17 early 1970s?

18 A. I believe so.

19 Q. Who at the Wilmington plant would know
20 whether or not the Charles George Trucking Company
21 was picking up this trash in the early 1970s?

22 A. The man that made the arrangements name
23 was Howard Moorman, M O O R M A N. He was in
24 charge of shipping and receiving. He ran the

1 warehouse.

2 Q. Where is he, if you know, Howard Moorman?

3 A. He is deceased.

4 Q. Are there any other employees at the
5 plant who would know whether or not the Charles
6 George Trucking Company was picking up the trash
7 during the 1970s?

8 A. Ron McBrien would probably know.

9 Q. Who is Ron McBrien?

10 A. He was the plant manager.

11 Q. Was he familiar with the waste products
12 and waste streams of the plant?

13 A. He would be.

14 Q. Was he familiar with how the waste
15 materials were disposed of?

16 A. I can't answer for that.

17 MS. BECK: Objection.

18 Q. Was there someone named Marciano at the
19 plant?

20 A. Marciano. He was an operator and
21 forklift driver in the warehouse.

22 Q. Would he have been familiar with whether
23 or not the Charles George Trucking Company was
24 picking up trash at the plant?

1 A. He might have seen them. He was in the
2 warehouse area.

3 Q. So is it your testimony that you don't
4 know when the Charles George Trucking Company
5 discontinued its service --

6 A. No.

7 Q. -- at the Wilmington plant?

8 A. No, I have no knowledge of that.

9 Q. You can't give me an estimate?

10 A. No.

11 Q. Did the Wilmington plant have any waste
12 segregation policies during the late 1960s after
13 the sale?

14 A. Well, none of the chemicals were ever
15 sent out as waste. They were always recycled and
16 reworked. The waste sent out by Charles George
17 was office waste, scrap metals, and broken
18 pallets, things like that. The policy was never
19 to put any chemicals into the dumpsters.

20 MR. FRANKEL: I'd like to mark as
21 Exhibit 4 a letter from Charles George to Mr.
22 Anthony Green of National Polychemicals Company,
23 dated July 17, 1969.

24 (Exhibit 4 marked for

1 identification).

2 MR. CHEFITZ: Which of the various
3 Charles Georges are you talking about?

4 MR. FRANKEL: The letter merely
5 states Charles George. There is no junior after
6 it, or senior. It's not clear.

7 Q. (Handing).

8 A. (Witness peruses document).

9 Q. Have you had a chance to review that, Mr.
10 Riley?

11 A. Yes.

12 Q. Who is Anthony Green?

13 A. Anthony Green was in charge of purchasing
14 during this period at National Polychemicals.

15 Q. Do you know when Anthony Green started
16 working at National Polychemicals?

17 A. Yes; in 1964. He came with the British.

18 Q. What do you mean he came with the
19 British?

20 A. He's a citizen of the United Kingdom, and
21 he arrived when Fisons purchased National
22 Polychemicals.

23 Q. Which was in 1964?

24 A. '64, right.

1 Q. How long did Anthony Green stay with
2 National Polychemicals or Stepan after '68?

3 A. He was there until '73 when he
4 transferred to Northfield, Illinois with Stepan.

5 Q. Where is he today?

6 A. He's still in Illinois with Stepan.

7 Q. What's his position with Stepan?

8 A. He's international vice president --
9 purchasing agent.

10 Q. Let me refer you to the first paragraph
11 of this letter. The letter states, "It is with
12 regret that we inform you of increased prices, due
13 to the rising costs of operations, on the thirty
14 cubic yard containers you use for the removal of
15 chemicals, and wood, etc."

16 Are these thirty-cubic-yard containers the
17 dumpsters that you --

18 A. No. No. These were other containers.
19 These are open containers.

20 Q. Could you describe for me the difference
21 between the dumpsters that you testified to
22 earlier and these thirty-cubic- --

23 A. The dumpsters are capable --

24 MS. BECK: Let him finish the

1 question so she can get it.

2 MR. FRANKEL: Just for the reporter.

3 Q. Could you explain for me the difference
4 between these thirty-cubic-yard containers and the
5 dumpsters that you testified to previously?

6 A. The dumpsters were capable of being
7 lifted up and deposited into trash trucks. The
8 container, the thirty-yard container being
9 referred to here, is a container that is capable
10 of removing drums and containers like that.

11 Q. How many of these thirty-cubic-yard
12 containers were located at the Wilmington plant?

13 MS. BECK: Objection.

14 Q. Were thirty-cubic-yard containers located
15 at the Wilmington plant?

16 A. I recall once a year during the spring
17 clean-up a container would be brought in and it
18 would be loaded with drums, and then it was taken
19 out of the plant.

20 Q. What types of drums were loaded into the
21 thirty-cubic-yard container?

22 A. Fifty-five-gallon steel drums.

23 Q. What was contained in these
24 fifty-five-gallon steel drums?

1 A. I have no knowledge whether there was
2 anything in them or not. It could have been
3 excess raw materials.

4 Q. Who knew what was contained in these
5 drums?

6 MR. COSBY: Objection.

7 MR. CHEFITZ: He doesn't know
8 anything was in the drum.

9 MR. COSBY: Or that he knows who
10 knew.

11 Q. Who would have been in a a position to
12 know whether or not the drums contained any
13 materials?

14 A. Mr. Moorman would have, but he can't help
15 us.

16 Q. How about Mr. Green?

17 A. Mr. Green wouldn't know.

18 Q. How about Mr. McBrien?

19 A. I'm not sure he would know. I don't
20 know.

21 Q. How about Mr. Marciano?

22 A. I don't know if he would know.

23 Q. This letter refers to the removal of
24 chemicals. Do you know whether or not that is

1 accurate?

2 MS. BECK: Objection.

3 That's Charles George's definition. It's
4 not our company's comment.

5 MR. FRANKEL: I'm just asking the
6 witness whether or not chemicals were removed in
7 these thirty-yard- -- thirty-cubic-yard
8 containers.

9 MS. BECK: I think he just answered
10 the question.

11 A. I have no way of knowing.

12 Q. Do you know whether or not the drums had
13 off-spec. products?

14 A. I have no way of knowing.

15 I testified earlier, I think that off-spec.
16 products were recycled. That was the policy of
17 the plant.

18 Q. All of the off-spec. products?

19 A. Yes.

20 Q. You testified earlier that the
21 thirty-yard container was sent to the facility, I
22 believe you said about once a year?

23 A. Yes. That's my recollection.

24 Q. Could you tell me --

1 A. In the spring.

2 Q. Could you tell me during which years this
3 occurred?

4 A. I couldn't specifically say.

5 Q. Could you tell me approximately when it
6 began?

7 A. Probably in '59.

8 Q. Can you tell me approximately when the
9 practice was discontinued?

10 A. I have no idea.

11 Q. Do you know whether or not the
12 thirty-yard containers were picked up during the
13 early 1970s -- I'll say late 1960s and early
14 1970s.

15 MS. BECK: Objection to the form of
16 the question.

17 A. They may have been.

18 Q. But you don't know?

19 A. I can't be specific. I can't give you a
20 specific time and year in that period at this
21 point. I do recall at times a container like that
22 being loaded with drums and the container leaving
23 the plant.

24 Q. What else besides drums was put in the

1 container?

2 A. That's all I recall were the drums.

3 Q. Do you know how many drums were put in
4 the container?

5 A. No.

6 Q. Do you know what company removed the
7 materials that were placed in the container?

8 A. No, I have no knowledge of that.

9 MS. BECK: Objection.

10 Q. Do you know whether or not the entire
11 container was removed, or whether a company came
12 in and removed only the materials inside the
13 container?

14 MS. BECK: Objection.

15 There is no testimony that there was
16 material inside the container.

17 MR. FRANKEL: I believe there is
18 testimony there were drums in the container.

19 MS. BECK: You're talking about the
20 thirty-cubic-yard versus the drums, which are a
21 container. Let's just differentiate so we're not
22 confused.

23 Q. Do you know what company, if any, came to
24 remove the materials that were placed in the

1 thirty-cubic-yard container?

2 A. No. I have no recollection of who it
3 was. I know that George took the dumpsters every
4 day because his trucks came in and they had
5 "Charles George Trucking" on them. How these were
6 -- I don't recall how these were removed.

7 Q. Let me refer you to the second paragraph
8 of the letter.

9 MR. FREDERICO: Have you got another
10 copy?

11 MR. FRANKEL: Yes.

12 Q. The letter refers to, "the removal of
13 chemicals in drums." Can you tell me what that
14 refers to?

15 MR. COSBY: Objection.

16 A. I have no idea. It could be water.

17 Q. Is there anyone else that you haven't
18 mentioned to me previously who would know whether
19 or not chemicals were placed in these drums?

20 A. No one I can recall.

21 Q. No one at all who worked at the plant?

22 MS. BECK: Objection.

23 Asked and answered.

24 Q. Was there anyone at the plant that was in

1 charge of disposal of waste drums?

2 MS. BECK: Objection.

3 MR. COSBY: Objection.

4 A. No.

5 Q. Was there anyone at the plant who
6 actually would have hauled the drums out to the
7 container -- the thirty-yard container?

8 A. Someone might have. Someone would have.

9 Q. Do you know who that was?

10 A. No.

11 Q. Other than placing these drums in this
12 thirty-yard container, do you know whether
13 anything else was done with waste drums at the
14 Wilmington plant?

15 A. No.

16 MR. CHEFITZ: What time period are
17 we talking about?

18 MR. FRANKEL: I'm talking about the
19 late 1960s and early 1970s.

20 MR. CHEFITZ: Can we assume that's
21 the period you're going to be talking about?

22 MR. FREDERICO: You mean after the
23 sale in the late 1960s?

24 MR. FRANKEL: Yes.

1 MS. BECK: Does that mean you're
2 waiving any claim that there was hazardous waste
3 disposal before 1968?

4 MR. FRANKEL: No. I'm just asking
5 questions about post-1968 at this point.

6 Would you read back the last question,
7 please.

8 (Whereupon, the court reporter read
9 a portion of the record).

10 A. No.

11 Q. I've asked you questions about this
12 thirty-cubic-yard container with respect to the
13 period after the sale in 1968 going to the early
14 1970s. Would your answers be different if I asked
15 you that series of questions for the period prior
16 to 19- -- the sale in 1968?

17 MR. FREDERICO: Objection.

18 A. No.

19 MR. FRANKEL: Again, I just want to
20 note for the record that this is a 30(b)(6)
21 deposition, and one of the subject areas was the
22 removal of waste materials by the Charles George
23 Trucking Company, so I would request that Stepan
24 designate another individual who can inform me

1 concerning the nature of the waste that is based
2 upon this letter which appears to have been picked
3 up by the Charles George Trucking Company in a
4 thirty-cubic-yard container.

5 MR. CHEFITZ: Objection.

6 MS. BECK: Olin bought this facility
7 in 1980. The Defendant Stepan hasn't owned this
8 place. In 1990 we're making available an
9 individual who worked at that site who has
10 knowledge. He is the most knowledgeable
11 individual at Stepan.

12 You've stated for the record what you want,
13 and we'll take it in front of the Judge if you
14 want to pursue it.

15 MR. FRANKEL: I just want to
16 indicate that under Rule 30(b)(6), the company is
17 requested to designate an individual to testify
18 concerning matters known by the company or
19 reasonably available to the company. I don't
20 expect --

21 MR. CHEFITZ: We know what a Rule
22 30(b)(6) is.

23 MS. BECK: You can file your motion
24 with the Judge and we'll take it up in front of

1 the Judge if you want to pursue it.

2 MR. FRANKEL: For the record, I'm
3 not asking Stepan to produce witnesses with
4 respect to information that's not known or
5 reasonably available to Stepan. And I understand
6 that the facility was sold to Olin in 1980.

7 BY: MR. FRANKEL:

8 Q. Mr. Riley, let me ask you some questions
9 now about the gypsum cake. That's the calcium
10 sulfate; is that correct --

11 A. Yes.

12 Q. -- that you testified about earlier?

13 A. Yes.

14 Q. Could you tell me a little bit more about
15 the process that was used at the wastewater
16 treatment plant in order to produce this -- I'll
17 call it gypsum cake? How did that work? You
18 mentioned something about lime slurry, I believe.

19 A. The chemical waste streams were combined
20 in an equalization tank, and a lime slurry was
21 added under pH control to raise the pH to 6 to 9.
22 This was the requirement that was set for the
23 construction of the treatment plant. This was the
24 specification, that we would turn out an effluent

1 that had a pH between 6 and 9. In adding this
2 calcium hydroxide to the material, you
3 precipitated out calcium sulfate. Calcium sulfate
4 was separated by filtration.

5 Q. Calcium hydroxide, is that lime?

6 A. That's lime.

7 Q. That's the chemical term for lime?

8 A. Yes. That's the hydrated lime. Lime
9 itself is calcium oxide. If you add water to it
10 you get calcium hydroxide.

11 Q. Where did the Wilmington facility obtain
12 this lime?

13 A. I don't remember.

14 Q. Was it purchased from some other company?

15 A. Yes.

16 Q. Besides the calcium hydroxide, were there
17 any other substances in the lime that you
18 purchased?

19 A. No.

20 Q. It was pure calcium hydroxide?

21 A. Yes.

22 I think it was bought from Pfizer,
23 P F I Z E R, Pfizer Corporation in North Adams,
24 Massachusetts. Brought in in bulk.

1 Q. Was this lime then mixed in with the
2 wastewater flowing into the treatment plant?

3 A. It was mixed with water first.

4 Q. First mixed with water?

5 A. To form a calcium hydroxide solution.

6 Q. Is that what you refer to as lime slurry?

7 A. Yes.

8 Q. Was this lime slurry then mixed with the
9 effluent?

10 A. Yes.

11 Q. Can you tell me in general terms what the
12 chemical reaction was between the lime slurry and
13 the effluent?

14 A. You neutralized the -- any sulfuric acid.

15 Q. That is H₂SO₄?

16 A. Or any hydrochloric acid in the system to
17 the corresponding calcium salts. And you get
18 calcium sulfate and/or calcium chloride.

19 Q. After the lime slurry was mixed with the
20 effluent, what happened to the by-products, if you
21 could just tell me in a little more detail.

22 A. You precipitate the calcium sulfate.
23 Gypsum is one of the most insoluble in water
24 materials that there is.

1 Q. How did you precipitate that?

2 A. It just comes out automatically. It's a
3 chemical reaction. You add calcium hydroxide to a
4 stream containing sulfate ions, you precipitate
5 out calcium sulfate.

6 Q. Does it just drop to the bottom?

7 A. It comes out. Makes a beautiful white
8 precipitate. Lovely.

9 Q. And what happens with the other
10 materials? Do they remain?

11 A. They stay in solution. So then when you
12 filter the calcium sulfate, you separate it from
13 all of these other materials that are in solution.

14 Q. When you say filter, was all this
15 material run through a series of filters?

16 A. What we call a rotary drum filter, which
17 is a big drum, and the material is actually laid
18 onto a drum and the cake stays on the drum and the
19 solution goes through the drum, and comes out as a
20 solution. Then you drop the cake off this drum as
21 it goes around. Then it comes around and picks up
22 more cake.

23 Q. Now, let me start not with the cake, but
24 with the solution that was remaining. Is it your

1 testimony that that was sent into the sewer
2 system?

3 A. Starting when?

4 Q. Let me start with 19- -- well, I believe
5 your testimony was that the wastewater treatment
6 plant began operation in about 1971 or '72?

7 A. About -- yes, about '70 to '71; in that
8 period.

9 Q. I believe you testified that for a
10 certain period of time for maybe two, three, or
11 four years, before the lime lagoons were built,
12 you handled the waste in a certain manner --

13 A. Right.

14 Q. -- whereby you flushed it into the sewer
15 system -- discharged it into the sewer system?

16 A. You've got it confused now.

17 Q. Okay.

18 A. There are three events occurring that we
19 have to keep separate.

20 Q. Please explain.

21 A. One, we built a treatment plant under a
22 compliance order. When that plant started up, we
23 started neutralizing the material and sending out
24 the cake. The effluent from the plant was still

1 going into the lagoons on site, because the sewer
2 hadn't been built yet. The sewer didn't come
3 available until about -- sometime in '72 or '73.
4 But there was a period where we were precipitating
5 and filtering calcium sulfate, and it was being
6 taken out of the plant. The sewer was not yet
7 ready so the filtrate was still going to the same
8 place it was going before, only now it's
9 neutralized; it's at a high pH.

10 Q. Into the lagoons on site?

11 A. Right.

12 Then the next event that happens, the sewer
13 is extended up from Woburn, Metropolitan District
14 Commission sewer, and when it's available, the
15 filtrate from the plant was connected into the
16 sewer. It no longer goes into the lagoons.

17 Then the last event is that sometime in
18 that period -- I can't recall the exact date --
19 the company gained approval to stop filtering the
20 gypsum, to just neutralize with calcium hydroxide
21 and just direct the slurry to a lined lagoon; a
22 plastic-lined lagoon was built. Everything was
23 sent to this lagoon. The gypsum dropped to the
24 bottom and the liquid was on top. The liquid was

1 sent to the sewer at that point.

2 Q. From the lagoons?

3 A. Yes.

4 And then this was done until the lagoon
5 completely filled up with gypsum. At that point
6 you went to another lagoon. You took all the
7 liquid off the lagoon and then you scooped out the
8 calcium sulfate, and that was deposited in a land
9 fill at the back of the plant property which was
10 adjacent to the Woburn city dump.

11 MR. CHEFITZ: If I could just
12 interject.

13 So is it your testimony that after this
14 lagoon you just mentioned, once that process
15 began, the gypsum cake was no longer leaving the
16 premises?

17 THE WITNESS: Right. It was being
18 deposited at the back of the plant property and in
19 an approval landfill.

20 BY: MR. FRANKEL:

21 Q. Can you give me the time period,
22 approximately, during which the calcium sulfate or
23 gypsum was transported off premises?

24 A. I think it was about two years, eighteen

1 months. Two years; somewhere in the period of '71
2 to '73, or '72 to '74. It was a fairly short time
3 period.

4 Q. Is it your testimony that the Charles
5 George Trucking Company picked up that gypsum
6 cake?

7 A. I believe they did.

8 Q. Can you tell me the chemical contents of
9 that gypsum cake?

10 A. Calcium sulfate.

11 Q. Was there anything other than calcium
12 sulfate?

13 A. No. It was very pure. Anything else
14 would have been very, very minimal amounts.

15 Q. What else would have been in there, even
16 if it was in a minimal amount?

17 A. Sodium sulfate, sodium chloride, calcium.
18 Might have picked up some sodium chloride, some
19 sodium sulfate, some ammonium sulfate.

20 Q. Any other materials, even if they were
21 minimal? Was there any formaldehyde in the gypsum
22 cake?

23 A. No. Formaldehyde is a gas.

24 Q. How about sodium nitrite?

1 A. I think I testified earlier that sodium
2 nitrite can't exist in that strongly acid system,
3 so when you hit the equalization tank you would
4 have converted that to nitrous oxide and sodium
5 sulfate.

6 Q. How about ammonium chloride, NH_4Cl ?

7 A. I wouldn't expect any ammonium chloride.
8 I don't know where it would come from. There
9 certainly wasn't any ammonia in there. You can
10 understand that; ammonia in a strong acid solution
11 becomes ammonium sulfate. It wouldn't hang around
12 as ammonia gas.

13 Q. Who were the persons at the Wilmington
14 plant that operated that wastewater treatment
15 facility during the period of time that the gypsum
16 waste was being picked up?

17 A. I don't recall.

18 Q. Do you know any names of persons?

19 A. Ron McBrien would have been the plant
20 manager. It would have been under him. I don't
21 recall who was actually running it.

22 Q. Who was most familiar with the chemical
23 processes that were taking place at the wastewater
24 treatment plant?

1 MS. BECK: Objection to the form of
2 the question.

3 A. The plant was designed by an engineering
4 company from Cambridge.

5 Q. What company was that?

6 A. Badger.

7 Q. Do you know the names of the persons at
8 Badger who worked on the design?

9 A. I've forgotten. I've forgotten their
10 names.

11 Q. Was there anyone from the Wilmington
12 facility that would have been familiar with the
13 chemical processes at the wastewater treatment
14 plant?

15 A. There was an engineer named Roger
16 Williams.

17 Q. Roger Williams?

18 A. Yes. I have no idea where he is. The
19 last I heard he was living in New Hampshire.

20 Q. Anybody else?

21 A. No.

22 MR. FRANKEL: I'd like to have
23 marked as Exhibit 5 a letter from Ronald McBrien
24 to Thomas McMahon of the Division of Water

1 Pollution Control dated October 16, 1970.

2 (Exhibit 5 marked for
3 identification).

4 Q. And I would ask the witness to take a
5 look at that (handing).

6 A. (Witness peruses document).

7 I did get the Badger Company right.

8 Q. Have you had a chance to look at this
9 document?

10 A. Yes.

11 Q. Is Ronald McBrien the individual that you
12 testified about earlier?

13 A. Yes. He's the plant manager, it says
14 here.

15 Q. Who were the cc parties listed on Page 2?

16 A. EVO would be Edward Osberg. I testified
17 he was the president of the National
18 Polychemicals. CPR is myself. And the Badger
19 Company.

20 Q. Do you recall seeing this letter?

21 A. No.

22 Q. Do you know why Mr. McBrien was writing
23 to Mr. McMahon concerning the issues in the
24 letter?

1 MS. BECK: Objection.

2 You're not asking him to interpret this
3 letter?

4 MR. FRANKEL: No, I'm not.

5 I'm asking if he independently knows why
6 National Polychemicals was in touch with the
7 Division of Water Pollution Control concerning the
8 matters in the letter.

9 Q. Feel free to read the letter.

10 A. This was agreeing on the specifications
11 for the waste to go into the MDC sewer. Normal
12 proceeding.

13 Q. Do you know why the letter was signed
14 National Polychemicals, Inc.?

15 MS. BECK: Did you hear the
16 question?

17 I'm going to object to the question.

18 I think he's already explained the
19 relationships.

20 Q. Let me refer you to the first page of the
21 letter. At the bottom it says, "A Subsidiary of
22 Stepan Chemical Company?"

23 A. Yes; well, this was in that period that I
24 testified to where Stepan had not gone to the

1 matrix organization, which occurred sometime after
2 this. And so National Poly had their own
3 president and they -- manufacturing was reporting
4 in to the president, and then into Stepan. This
5 is in that period.

6 Q. That was the period that the president
7 reported directly to the chairman of Stepan?

8 A. Yes.

9 Q. What was the new design that the Badger
10 Company had developed? Was that the wastewater
11 treatment facility?

12 A. I have no idea what that refers to. New
13 design? Does it say that: "A new design?"

14 Q. I believe so.

15 A. It says, "supplement a plant design."

16 Q. Do you know what that would have been
17 about?

18 A. This goes along with the design. The
19 design is a mechanical engineering design that
20 Badger had provided for the wastewater treatment
21 plant.

22 Q. Is this the same wastewater treatment
23 plant you were referring to earlier?

24 A. Yes.

1 Q. Let me refer you to the last paragraph on
2 Page 1. The paragraph refers to, "cake disposal?"

3 A. Yes.

4 Q. It says, "This cake, generated as a
5 result of the neutralization of the plant
6 effluent, amounts to approximately twenty-eight
7 tons per day; and, it has been proposed that this
8 material be used as sanitary landfill."

9 Is this the gypsum cake that you testified
10 to earlier today?

11 A. Yes.

12 Q. Can you confirm that the production was
13 about twenty-eight tons per day?

14 A. I don't have knowledge of that.

15 Q. Is this the gypsum cake that you believe
16 was picked up by the Charles George Trucking
17 Company --

18 A. Yes.

19 Q. -- during the period of two to three
20 years?

21 A. Yes.

22 Q. Let me refer --

23 MR. CHEFITZ: Objection.

24 It wasn't two or three years. I believe he

1 said eighteen months.

2 A. Eighteen to twenty-four months.

3 Something like that.

4 Q. I believe you've testified at one point
5 you said two to four years, and maybe you changed
6 that?

7 A. Yes, I think I did cut it down.

8 Q. Let me refer you to the substances listed
9 on Page 2. The letter says at the bottom of Page
10 1 that, "The cake has a bulk density of eighty
11 pounds per cubic foot and will have the following
12 analysis:" I wanted to ask you whether or not you
13 could tell me whether or not these substances
14 were, in fact, in the cake?

15 A. I have no idea.

16 Q. Well, let me just go through them; water?

17 A. I would expect water to be there.

18 Q. Gypsum?

19 A. Yes.

20 Q. Calcium carbonate?

21 A. Could be.

22 Q. It was or you're not sure?

23 A. I have no way of knowing. I didn't do
24 this analysis and I didn't provide the sample for

1 this analysis, so I can't testify to what was in
2 the analysis, obviously. I didn't do this and I
3 didn't provide the sample.

4 Q. Who did provide the sample, do you know?

5 MS. BECK: Objection.

6 A. I have no idea.

7 Q. Do you know who did the analysis?

8 A. No.

9 Q. How about calcium oxybisbenzene
10 sulfonate, do you know if that was in the gypsum
11 cake?

12 MS. HARRIS: Objection.

13 MR. COSBY: Objection.

14 A. I have no knowledge of this analysis; of
15 where it came from and how it was done.

16 Q. Aside from the analysis --

17 A. Is it typical? If you're asking me if
18 it's typical, would I expect it; yes, it's
19 typical.

20 Q. How about the sodium sulfate?

21 A. Yes.

22 Q. The ammonium hydroxide?

23 A. Yes -- wait a minute. That's not
24 ammonium, that's aluminum hydroxide.

1 Q. Aluminum hydroxide. I misspoke.

2 A. Yes, trace amounts. Definition of trace
3 is a very minimal amount that one cannot analyze
4 for accurately. A trace analysis is normally
5 something you can detect, but you cannot say how
6 much is there. In other words -- this is in
7 normal scientific parlance -- if it's a trace you
8 can detect it's there, but I can't tell you how
9 many parts per million are there.

10 Q. Do you know the approximate detection
11 limits?

12 A. No, I don't know. I don't know how the
13 analysis was done.

14 Q. You don't know who did this analysis?

15 A. No, I don't.

16 Q. Sodium chloride, I've got that right?

17 A. Yes.

18 Q. Salt; right?

19 A. That's right.

20 Q. Would you expect that in trace amounts?

21 A. Yes.

22 Q. How about calcium chloride?

23 A. It could have been there.

24 Q. Formaldehyde?

1 A. I would be surprised. Formaldehyde is a
2 gas. It doesn't usually stay around in the
3 system.

4 Q. Was formaldehyde one of the waste
5 products?

6 A. Traces of formaldehyde were.

7 Q. When you say trace again, you can't tell
8 me how much?

9 A. No.

10 Q. How about -- is the next one sodium
11 nitrite?

12 A. Yes.

13 Q. Would you expect that to be there in
14 trace amounts?

15 A. No. That wouldn't normally be there
16 under an acid solution.

17 Q. Under what conditions would it be there?

18 A. Well, I imagine it could be there under a
19 trace. Anything can be there under a trace,
20 depending on how the analysis is done.

21 Q. Was sodium nitrite one of the waste
22 products of the wastewater treatment plant?

23 A. No, it wasn't, because it would have been
24 decomposed to sodium sulfate.

1 Q. But at one point in the chemical process,
2 was sodium nitrite produced?

3 A. It was used. It's a raw material. And
4 coming out of the building that made Product No.
5 1, it might have been, but when you combine
6 effluent in the equalization tank with a very
7 strong sulfuric acid system, it wouldn't be
8 staying around.

9 Q. In any amounts?

10 A. No.

11 Q. How about the last substance, I believe
12 that's ammonium chloride, NH_4Cl ?

13 A. Anything could be there in a trace
14 analysis. Any of these things.

15 Q. Let me ask you about an Interrogatory
16 response. I believe in response to Interrogatory
17 23, Stepan indicated that the gypsum cake
18 contained calcium sulfate, sodium chloride, sodium
19 sulfate, and ammonium sulfate. Does that sound
20 correct to you?

21 A. That the gypsum cake contained that?

22 Q. Yes. It says, "Ninety-nine percent
23 calcium sulfate, and one percent sodium chloride,
24 sodium sulfate and ammonium sulfate.

1 MS. BECK: Do you have the
2 Interrogatory?

3 MR. FRANKEL: Yes, I do.

4 MS. BECK: Could we see it?

5 MR. FRANKEL: Sure (handing).

6 Q. Let me just show you your answer to 23
7 there (indicating)?

8 A. (Witness peruses document).

9 A. One percent of all of these things
10 together, sodium sulfate, sodium chloride and
11 ammonium sulfate?

12 Q. Yes.

13 A. That's possible. I'll tell you why, when
14 you separate this cake, you separate some liquid
15 with the cake on the filter and then this liquid,
16 even though the inorganics are in the liquid, they
17 tend to go with the cake. Because they're in the
18 liquid, they went with the cake. So it was
19 probably twenty-five, thirty percent liquid that
20 went with the cake. That wouldn't be surprising.

21 Q. Do you know who at Stepan provided the
22 response for the contents of gypsum cake?

23 A. I think I probably did.

24 Q. Do you recall what you based that on?

1 A. Memory.

2 Q. Let me refer you again to the letter we
3 were just looking at, the second page.

4 Q. Do you know whether or not the elements
5 listed as trace elements might have been contained
6 in the water that was used in connection with the
7 wastewater treatment?

8 A. Some of them could. Or you could have
9 got contamination by -- picked up contamination at
10 the site or through the laboratory.

11 Q. I'm sorry, through what?

12 A. Through the laboratory; someone could
13 have dumped something down a drain and it would
14 have ended up in the analysis.

15 Q. Where did the water come from that you
16 used in your wastewater treatment?

17 A. It was Town water.

18 Q. So how would laboratory --

19 A. It was well water.

20 MS. BECK: You're talking about the
21 laboratory analysis, and he said there could be
22 contamination in the laboratory analysis.

23 Q. Is that what you are saying; at the time
24 they did the analysis?

1 A. Yes.

2 Q. Let me ask you about the water that's
3 referred to at the top. Is that a filtrate?

4 A. That's -- yes. That's -- well, no.
5 Well, I'm not sure. I can't really say. I didn't
6 do this "following analysis."

7 Q. What I'm asking you is, where did the
8 water come from that ended up in the gypsum cake?

9 MS. BECK: Objection.

10 I don't think that's what this says.

11 MR. FRANKEL: I'm not asking
12 specifically about the letter. I'm asking the
13 witness --

14 A. I have no idea. I really don't know. I
15 didn't do this, and I don't know where the sample
16 came from, and I don't know how it was analyzed
17 and I can't comment on it.

18 Q. Putting aside this letter, you testified
19 previously about a chemical process at the
20 wastewater treatment plant and I believe you
21 indicated that lime slurry, which was lime added
22 to water, was then added to the effluent, mixed
23 together, and certain chemical processes took
24 place?

1 A. Right.

2 Q. I'm asking you where the water came from,
3 first of all, that was added to the lime?

4 A. It was Town water. I just testified to
5 that.

6 Q. And how about the water that came in with
7 the effluent, the waste product; was that Town
8 water?

9 A. Yes.

10 Q. Do you know which employees from the
11 Wilmington plant could tell me the amount of the
12 gypsum cake that was produced?

13 MS. BECK: Objection.

14 A. I don't think anybody could tell you that
15 today.

16 Q. Nobody could?

17 A. No.

18 MR. FRANKEL: I'd like to mark as
19 Exhibit 6 a November 4, 1970 letter.

20 (Exhibit 6 marked for
21 identification).

22 MR. FRANKEL: It's from Kenneth
23 Tarbell, District Sanitary Engineer, to National
24 Polychemical, Inc., Attention: Anthony Green.

1 Q. (Hanging).

2 A. (Witness peruses document).

3 Q. Have you had a chance to look at that?

4 A. Yes.

5 Q. Can you tell me on the cc parties who Mr.
6 C. Moore is at the Badger Company?

7 A. He was the engineer from Badger.

8 Q. For the wastewater treatment plant?

9 A. Yes.

10 Q. Let me refer you to the first paragraph.
11 It refers to, "the neutralization of sulfuric acid
12 by the use of a lime slurry." It indicates that,
13 "after filtration and concentration consists of a
14 gypsum cake."

15 Is this the same gypsum cake you've been
16 testifying about earlier?

17 A. Yes.

18 Q. It refers to, "certain other trace
19 compounds." Again, is it your testimony that you
20 don't know what those trace compounds are?

21 A. That's correct.

22 Q. And in the second paragraph of the
23 letter, it indicates that, "The Division of
24 Environmental Health is of the opinion that the

1 material produced is suitable for disposal by
2 sanitary landfill methods, provided that the
3 material is placed in a minimum of four feet above
4 anticipated ground water, and that suitable
5 precautions are taken to prevent the carriage of
6 any material to surface streams in the area of
7 disposal."

8 Do you recall having discussions with --

9 A. No.

10 MS. BECK: Let him finish his
11 question.

12 Q. Do you recall that the Wilmington plant
13 had discussions with State officials concerning
14 the disposal of the gypsum cake?

15 A. Do I recall discussions taking place?

16 Q. Yes.

17 A. Yes.

18 Q. Could you tell me what those discussions
19 were about?

20 A. I don't remember them in detail. I do
21 remember them taking place, though.

22 Q. Do you remember generally what they were
23 about?

24 A. Generally the State gave approval to

1 disposing of this material in a landfill.

2 Q. Do you know why the State requested that
3 the material be placed four feet above ground
4 water?

5 MS. BECK: Objection.

6 MS. HARRIS: Objection.

7 A. I don't think it was that -- that
8 stipulation was made when we were allowed the
9 landfill on our land. I don't remember that.

10 Q. I'm sorry, could you say that again?

11 A. I don't remember that stipulation being
12 made when we had the landfill established on the
13 company land next to the Woburn dump where we
14 eventually went with gypsum.

15 Q. That was much later; correct? Much later
16 than 1970?

17 MR. COSBY: Objection.

18 A. Five, six years.

19 Q. Do you see where it says, "Tyngsboro
20 landfill" on Page 1?

21 A. Yes.

22 Q. Do you know who wrote that?

23 A. No.

24 MR. FRANKEL: I'd like to mark as

1 Exhibit 7 a letter which, I apologize, it's
2 somewhat difficult to read. It's dated March of
3 1971 from Gilbert Joly to National Polychemical,
4 Inc., Attention: Anthony Green, Ronald McBrien,
5 Roger Williams.

6 (Exhibit 7 marked for
7 identification).

8 Q. (Handing).

9 A. (Witness peruses document).

10 Q. Can you tell me who Roger Williams is?

11 A. Roger Williams was the plant engineer at
12 National Poly during this period.

13 Q. Do you know where he is now?

14 A. No.

15 Q. Do you know where he's employed?

16 A. No.

17 I testified previously that I didn't know.

18 Q. The first paragraph -- it is difficult to
19 read -- I believe it says, "This letter is to
20 confirm" -- the next word I can't make out

21 MS. BECK: "Verbal?"

22 A. "Verbal."

23 Q. -- "Verbal approval given to you on March
24 1, 1971 regarding disposal of your gypsum waste at

1 the Charles George Sanitary Landfill in Tyngsboro,
2 Massachusetts."

3 Do you recall that National Polychemicals
4 obtained such approval?

5 A. Yes.

6 Q. Did National Polychemicals go ahead and
7 implement this plan to dispose of the gypsum cake
8 at the Charles George Landfill?

9 MR. CHEFITZ: Objection.

10 When the witness answered "yes" to the
11 previous question, did he answer "yes" to mean
12 approval of the disposal generally, or
13 specifically he remembered disposals at the
14 Charles George Landfill?

15 A. Approval in general was given. I know
16 nothing about approval at a site. I don't
17 remember this letter specifically.

18 Q. You don't remember that a specific site
19 was approved?

20 A. No. I do remember that approval was
21 given to dispose of the gypsum in a sanitary
22 landfill.

23 Q. Let me refer you to Paragraph 3 where it
24 refers to, "Inasmuch as the Charles George

1 Sanitary Landfill is an operating approved
2 landfill, it will not be necessary to submit
3 plans, etc. and the disposal may begin at any time
4 you desire."

5 Does this refresh your recollection
6 concerning whether or not a particular landfill
7 was approved?

8 A. No; because I was never sure whether or
9 not George -- where they were taking it, whether
10 they were taking it to the Woburn landfill, or
11 where.

12 Q. Is it --

13 A. I just saw the trucks drive out of the
14 yard and I never knew where they went to.

15 Q. So your testimony is that Charles George
16 Trucking Company trucks picked up the gypsum, but
17 you don't know where they took it?

18 A. I believe they did, but I don't know
19 where they took it.

20 MR. FRANKEL: I'd like to mark as
21 Exhibit 8 a letter from National Polychemicals,
22 Ronald McBrien to John Casazza, C A S A Z Z A, of
23 the Water Resources Commission dated August 27,
24 1971.

1 (Exhibit 8 marked for
2 identification).

3 Q. (Handing).

4 A. (Witness peruses document).

5 Q. Have you had a chance to review this
6 letter?

7 A. Yes.

8 Q. Can you tell me what's being referred to
9 in Paragraph 2 where it says, "In reference to the
10 starting date of September 15?" Is that the
11 starting date for the wastewater treatment plant?

12 A. I would believe that's what it is. I
13 don't know. I haven't seen this letter.

14 Q. Referring to the fourth paragraph, the
15 letter refers to, "a copy of a letter from the
16 Department of Public Health dated July 16, 1971,
17 which is the result of an investigation by a
18 consulting firm, Dana F. Perkins & Sons, Inc., who
19 have proposed another method of dewatering the
20 calcium sulfate slurry."

21 What can you tell me about this study done
22 by Dana F. Perkins?

23 A. This led to putting in the lagoons for
24 dewatering, as opposed to filtering.

1 Q. Is it your testimony that that occurred
2 after the wastewater treatment plant was in
3 operation from about eighteen to twenty-four
4 months?

5 MR. COSBY: Objection.

6 I'm not clear whether you mean the study,
7 or anything that followed from the study.

8 MR. FRANKEL: I'm referring to
9 actual implementation.

10 A. Could you restate that?

11 Q. I believe you referred to earlier at one
12 point in time Stepan began to place the -- all of
13 the waste from the wastewater treatment plant into
14 plastic-lined lagoons. Is that correct?

15 A. That's correct.

16 Q. And is it your testimony that you believe
17 that this study related to that process?

18 A. Yes.

19 Q. Do you know whether Stepan has a copy of
20 that study?

21 A. I doubt it.

22 MR. FRANKEL: I request if such a
23 study is in the possession of Stepan Company --

24 THE WITNESS: There are no

1 engineering records with Stepan.

2 MS. BECK: Everything was left with
3 Olin.

4 THE WITNESS: Olin took all the
5 records.

6 MR. FRANKEL: I would like to mark
7 as Exhibit 9 --

8 MS. BECK: Let's take a short break.
9 (Whereupon, a brief recess was
10 taken).

11 CONTINUED DIRECT EXAMINATION

12 BY: MR. FRANKEL:

13 Q. Mr. Riley, let me go back.

14 With respect to the wastewater treatment
15 plant, could you tell me whether or not waste from
16 the lab facilities was sent and mixed with the
17 effluent that was treated?

18 MS. BECK: Objection.

19 A. I don't know. I don't remember.

20 Q. So was there waste produced by the
21 research facilities and the labs -- chemical
22 waste?

23 A. There would be some in doing analyses.

24 Q. What did the Wilmington plant do with

1 that?

2 A. I have no idea.

3 Q. Do you know whether it was put down the
4 drain?

5 A. Some of it was, yes. Solubles went down
6 the drain.

7 Q. Did that drain go into the effluent or
8 did it go directly to the sewer system?

9 A. I think I testified I'm not sure where it
10 went.

11 Q. Is it fair to say that at one point in
12 time there was -- was there no sewer line going
13 out --

14 A. Yes.

15 Q. -- to the plant?

16 A. Yes.

17 Q. None whatsoever?

18 A. Yes.

19 Q. So prior to the time the sewer line went
20 out to the plant, would that waste have to have
21 gone into the effluent?

22 MS. BECK: Objection.

23 A. I have no idea.

24 Q. What else could have happened to it?

1 MS. BECK: Objection.

2 A. I don't know.

3 Q. Can you tell me who would have known?

4 MS. BECK: Objection.

5 A. No.

6 Q. You can't recall anyone who worked at the
7 research facility who would have known what the
8 research facility did with its waste chemicals?

9 MS. BECK: Objection.

10 A. You would have to know who put the
11 plumbing in rather than who worked in the research
12 department. I don't remember where it went to.

13 MR. FRANKEL: I'd like to mark as
14 Exhibit 9 a letter from Ronald McBrien to Daniel
15 Bourque, B O U R Q U E, Commonwealth of
16 Massachusetts Division of Water Pollution Control,
17 dated June 19, 1979.

18 (Exhibit 9 marked for
19 identification).

20 Q. (Hanging).

21 A. (Witness peruses document).

22 Q. Have you had a chance to look at that?

23 A. Yes.

24 Q. Can you confirm for me that these were

1 the raw materials used at the Wilmington plant at
2 that time period?

3 MS. BECK: Objection.

4 I think you have to lay a foundation. This
5 letter is dated June, 1979.

6 A. They could have been used at that point.

7 Q. Would Mr. McBrien have been in a position
8 to know which raw materials were used at the
9 plant?

10 MR. CHEFITZ: Objection.

11 A. He was the plant manager. He wrote the
12 letter.

13 Q. Mr. Riley, you've previously testified
14 that at the Wilmington plant there were dumpsters
15 and there were also thirty-yard containers.

16 MS. BECK: Objection.

17 That's not his testimony.

18 MR. CHEFITZ: I object also on those
19 grounds.

20 Q. Was that inaccurate, what I just stated,
21 Mr. Riley?

22 A. Say that again.

23 Q. Did you previously testify that at the
24 Wilmington plant there were dumpsters?

1 A. Yes.

2 Q. Did you previously testify that these
3 dumpsters were picked up by the Charles George
4 Trucking Company?

5 A. Yes.

6 Q. Did you previously testify that you saw
7 thirty-yard containers at the plant on an annual
8 basis?

9 A. Yes, generally.

10 Q. Can you tell me whether there were any
11 other types of dumpsters or containers at the
12 Wilmington facility at any period of time that you
13 worked there?

14 MS. BECK: Objection.

15 MR. CHEFITZ: Objection.

16 MS. BECK: That's too broad a
17 question.

18 Q. Let me focus on the period 1968 through
19 1971 or '72.

20 A. I testified there was a dumpster that the
21 calcium sulfate went into from the filtering.

22 Q. Correct.

23 A. That's the only one I would recall.

24 Q. How about the period 1973 through '76?

1 A. I have no knowledge of any other
2 containers.

3 Q. How about the period prior to 19- --

4 A. I want to take that back. I'm a little
5 vague about when the gypsum was going out. It's
6 somewhere in the period I'd say '71 through '74,
7 for a two-year period.

8 Q. Correct.

9 A. So that still stands.

10 Q. I'm asking you, other than --

11 A. No.

12 Q. Other than the dumpster for the general
13 waste material and the thirty-yard containers and
14 the containers for the gypsum cake, are there any
15 other dumpsters or containers?

16 A. Not that I --

17 MR. COSBY: I'm going to object to
18 the use of the word "containers," because that's
19 broad and vague.

20 MS. BECK: It's confusing.

21 MR. FRANKEL: When I say
22 "containers," I'm talking about receptacles for
23 waste that were transported away from the site.

24 Q. Were there any other waste-type

1 receptacles that you recall?

2 A. Not that I can recall.

3 Q. I'd like to ask you now about another
4 Interrogatory response. This would be
5 Interrogatory number 19 -- I'm sorry,
6 Interrogatory number 2 for the United States'
7 first set of Interrogatories.

8 MS. BECK: Could we see it, please?

9 MR. FRANKEL: Yes (handing).

10 MS. BECK: What Interrogatory?

11 MR. FRANKEL: Number 2.

12 A. (Witness peruses document).

13 Q. The answer indicates that the Wilmington
14 plant used, "Azo compounds and nitrosamines and
15 hindered phenols." In connection with this
16 production, with respect to the azo compounds,
17 have you already testified concerning that
18 ingredient?

19 A. That is azodicarbonamide.

20 Q. How about the nitrosamine?

21 A. Nitrosamine is Product 1; what you
22 labeled Product 1.

23 Q. As I understand -- you can tell me
24 whether or not I understand it correctly, I assume

1 that the azo compounds, nitrosamines and hindered
2 phenols were the raw materials?

3 A. No, no. These are finished products.

4 Q. So the Interrogatory response says,
5 "rubber and plastic additives."

6 "Without waiving the foregoing objection,
7 Stepan Company states that rubber and plastic
8 additives were manufactured at the Wilmington,
9 Massachusetts site using generally azo compounds
10 and nitrosamines and hindered phenols. The
11 processes used were esterification, oxidation and
12 nitrosation."

13 Is it your testimony that the azo
14 compounds, nitrosamines and hindered phenols were
15 finished products and not raw materials?

16 A. It's a little bit garbled, but the azo
17 compounds and the nitrosamines were finished
18 products. That's the description of the finished
19 products.

20 Q. So they are not raw materials?

21 A. No.

22 Q. What about hindered phenols?

23 A. Hindered phenols were used as a raw
24 material in some products.

1 Q. Which products had hindered phenols as
2 raw materials? Any of the products that you
3 testified to earlier?

4 A. No, no. That wouldn't have been in those
5 products. I'm not quite sure what is aimed at
6 there, what they are describing.

7 Q. Do you know where Stepan obtained the
8 information for this Interrogatory response?

9 A. It looks like a lawyer wrote it, not a
10 chemist. It isn't a chemist, that's for sure.

11 Q. Do you know who provided the information
12 from the company?

13 A. No. It got a little garbled obviously in
14 being put together. It could have come from me,
15 but it got garbled by whoever wrote it.

16 Q. The processes referred to are
17 esterification, oxidation and nitrosation?

18 A. Yes.

19 Q. Have you previously testified with
20 respect to these processes?

21 A. Parts of them, yes.

22 Q. Let's start with esterification. Have
23 you covered that?

24 A. Not really.

1 Q. What is esterification?

2 A. It can describe a broad range of chemical
3 reactions.

4 Q. What is that range of reactions?

5 A. Esterification is mainly a reaction of an
6 alcohol with an acid -- with a fatty acid. It's
7 an organic reaction. A fatty acid is reacted with
8 an alcohol to form a compound known as an ester.

9 Q. Why was the Wilmington plant producing
10 esters.

11 MS. BECK: It's a process used, it
12 says.

13 Q. But the product of the process was
14 esters; is that correct?

15 A. This would go back to the early period
16 back in the fifties. There were some esters made
17 on site.

18 Q. Did this occur after the sale of the
19 facilities in 1968?

20 A. No. This would go back to the late
21 fifties. It was prior to -- prior to Fisons.

22 Q. How about oxidation?

23 A. Oxidation is in the azodicarbonamide
24 process. It's the second step.

1 Q. You described that previously, did you
2 not?

3 A. Right.

4 Q. What about nitrosation?

5 A. That's the reaction of hexamethylene
6 tetramine with sodium nitrite and hydrochloric
7 acid.

8 Q. Let me refer you to the response to
9 Interrogatory number 19.

10 A. (Witness peruses document).

11 What part of it?

12 Q. This Interrogatory asks Stepan to,
13 "Identify the chemical content of each plastic and
14 rubber additive, the processes that resulted in
15 the production of these materials," and skipping
16 over a little bit, "and the method and location of
17 disposal of off-specification and otherwise
18 unusable product."

19 I'm just asking you, if you can tell me, it
20 seems as though there are products listed, and
21 then what's listed after the products under A, B,
22 C, D and E, are these raw materials, or are these
23 waste products?

24 A. Under A, B, C, and D?

1 Q. Right.

2 A. A is -- A is azodicarbonamide as the
3 product. Hydrazine, urea and sulfuric acid are
4 the raw materials. We already testified to that.

5 Q. So you've got final product and the raw
6 materials are stated together there?

7 A. Right.

8 Q. Are there any wastes listed?

9 A. No.

10 Q. What about the product listed at B?

11 A. That's what you call Product 1.

12 Q. And --

13 A. That should be sodium nitrite instead of
14 nitrate. That's an error.

15 Q. Under B, that's incorrect?

16 A. Yes. That should be nitrite.

17 Q. Are the other substances listed correct?

18 A. Yes.

19 Q. And these are raw materials?

20 A. To make Product 1.

21 Q. So under B, after the dash, the
22 hydrochloric acid, sodium -- the hydrochloric
23 acid, sodium nitrite, and hexamethylene tetramine,
24 are those all the raw materials --

1 A. Yes.

2 Q. -- for that product?

3 A. Yes.

4 Q. Under C it says, "Activators/inhibitors
5 for organic chemical blowing agents." I don't
6 believe you testified about them previously?

7 A. No. These weren't reaction products.
8 These were blends of materials that were made and
9 sold with the prime products.

10 Q. Were there any waste products in
11 connection --

12 A. No, no. These were just simple blends of
13 materials.

14 Q. Under D is listed hindered phenol. I
15 don't believe you mentioned that as a product?

16 A. No, I didn't.

17 Q. Was that one of the products produced at
18 the Wilmington plant?

19 A. Yes.

20 Q. What is hindered phenol?

21 A. Hindered phenol is a phenol molecule with
22 large groups on it.

23 Q. I'm sorry?

24 A. Large substituent groups on the molecule.

1 Q. When did the Wilmington facility produce
2 hindered phenols?

3 A. Probably starting in the mid-sixties.

4 Q. And continuing until what date?

5 A. I have no idea whether they stopped or if
6 they stopped after '76.

7 Q. Under D, after hindered phenol, the
8 response lists dinonylphenol and formaldehyde?

9 A. Those are the raw materials.

10 Q. Was there a waste product in connection
11 with this --

12 A. No.

13 Q. -- product?

14 A. No. That was what we call a condensation
15 reaction between the dinonylphenol and
16 formaldehyde.

17 Q. Under E, "Protective agents," what are
18 protective agents?

19 A. I'm not sure. I would guess protection
20 of plastics from degradation, rubber.

21 Q. It lists phosphites and secondary amines?

22 A. Yes.

23 Q. Were they raw materials for this product?

24 A. They were the products, the phosphites

1 are the products.

2 Q. And how about the secondary amines?

3 A. I'm not sure what that refers to.

4 Q. Can you tell me whether there were any
5 phenols in the effluents any of the processes used
6 at the Wilmington plant?

7 A. As far as I know, there weren't any.
8 Because we didn't start with phenol, we started
9 with dinonylphenol, just as nonylphenol was
10 brought in. And this was a contained process.

11 Q. Let me ask you a series of questions now
12 relating to the relationship between the
13 Wilmington plant and the Charles George Trucking
14 Company under the Charles George Land Reclamation
15 Trust, which I'll refer to as the Landfill or the
16 Charles George Landfill.

17 MR. CHEFITZ: Objection.

18 MR. FRANKEL: Let me mark as Exhibit
19 10 a letter from Charles George, President Charles
20 George Trucking Company, Inc. to Anthony Green,
21 dated February 22, 1972.

22 (Exhibit 10 marked for
23 identification).

24 Q. (Hanging).

1 A. (Witness peruses document).

2 Q. Have you had a chance to look at that?

3 A. Yes.

4 Q. Do you know what this hauling and dumping
5 charge referred to in the letter was for?

6 A. No.

7 Q. Were you personally involved in
8 negotiations with the Charles George Trucking
9 Company --

10 A. No.

11 Q. -- or the Charles George Landfill?

12 A. No.

13 Q. Which employees at the Wilmington plant
14 were involved in negotiations or correspondence or
15 communications --

16 MR. COSBY: Objection.

17 Q. -- with the Charles George Trucking
18 Company or the Charles George Landfill?

19 MR. COSBY: Objection stands.

20 A. I don't know. Green was, apparently. He
21 was communicating with them.

22 Q. You may have testified to this earlier,
23 but I don't remember so I'll ask you again.

24 Do you know when the Charles George

1 Trucking Company began to service the Wilmington
2 plant?

3 A. No.

4 Q. Did you testify at one point earlier
5 today it was the late 1950s?

6 A. I said it was sometime in the late
7 fifties I recalled they started.

8 Q. Are you familiar with any of the
9 negotiations involved with that service?

10 MR. COSBY: Objection.

11 Q. Any of the negotiations that preceded
12 services provided by the Charles George Trucking
13 Company?

14 A. No.

15 MR. COSBY: Objection.

16 Q. Did you, yourself, have any contact with
17 the --

18 A. No.

19 Q. Let me finish for the reporter so she'll
20 get the entire question.

21 Did you have any contact, personally, with
22 any employees of the Charles George Trucking
23 Company --

24 A. No.

1 Q. -- or the Charles George Landfill?

2 A. No.

3 MR. FRANKEL: I'd like to mark as
4 Exhibit 11 a letter from Anthony Green to Mr.
5 Charles George dated February 28, 1972.

6 (Exhibit 11 marked for
7 identification).

8 Q. (Hanging).

9 A. (Witness peruses document).

10 Q. Have you had a chance to look at that?

11 A. Yes.

12 Q. Can you tell me why the Wilmington plant
13 was considering a compaction unit?

14 MR. COSBY: Objection.

15 A. Probably to save money.

16 Q. You say, "probably to save money." Are
17 you familiar or do you know about the
18 circumstances surrounding this proposal to obtain
19 a compaction unit in February of 1972?

20 MR. COSBY: Objection to the use of
21 the term "proposal."

22 A. Yes. The circumstances were, instead of
23 picking up the dumpsters on a regular basis, the
24 plant trash would be loaded into a compaction unit

1 and it would be picked up much less frequently.

2 Q. Do you know whether such a compaction
3 unit was placed at the plant?

4 A. It was.

5 Q. Do you know when that was?

6 A. No.

7 Q. Do you know who placed it there?

8 A. No.

9 Q. Do you know who picked up the materials
10 from the compaction unit?

11 A. No. I have no knowledge of that.

12 Q. You don't know whether or not it was the
13 Charles George Trucking Company?

14 A. No.

15 Q. The second paragraph of the letter refers
16 to, "the difficulty of restricting some unsuitable
17 items -- certain chemicals and wooden pallets --
18 from being included in the dumpster."

19 What can you tell me about the difficulties
20 that the Wilmington plant had in terms of
21 restricting these unsuitable items --

22 MR. COSBY: Objection.

23 MS. BECK: Objection.

24 Q. -- if you know of such difficulties?

1 MS. BECK: Objection.

2 A. I don't know what that refers to. I have
3 no idea.

4 Q. Could it refer to the difficulties of
5 separating out chemical waste from other wastes?

6 MR. CHEFITZ: Objection.

7 MR. COSBY: Objection.

8 MS. BECK: Objection.

9 A. I have no idea.

10 Q. Can you tell me what Stepan employees at
11 the time would have known about this issue?

12 MR. COSBY: Objection.

13 MR. CHEFITZ: He doesn't know
14 anything about the issue, so how can he tell you
15 anything about what he doesn't know about?

16 MS. BECK: Objection.

17 MR. FRANKEL: I believe as the plant
18 manager Mr. Riley would have been --

19 THE WITNESS: I wasn't the plant
20 manager. I wasn't the plant manager in 1972.

21 Q. What was your position?

22 A. General manager at that point.

23 Q. The general manager.

24 As general manager, could you tell me which

1 employees at the time would have been involved in
2 waste -- this type of waste disposal issue?

3 MS. BECK: Objection.

4 MR. CHEFITZ: Objection.

5 MR. COSBY: Objection.

6 A. I don't know. I wouldn't know.

7 Q. You wouldn't even know the titles of
8 those employees?

9 A. The only one I know was Moorman. As I
10 said before, he's deceased.

11 Q. McBrien; would he have known?

12 A. He may have. I don't know.

13 Q. Was there a certain employee at the
14 Wilmington plant who would have handled billing
15 and that type of thing for waste removal charges?

16 A. I don't know.

17 Q. Was there a bookkeeper at the plant?

18 MS. BECK: At what time period?

19 MR. FRANKEL: In 1972.

20 A. There were a number of people in
21 accounting.

22 Q. Can you tell me who some of those people
23 were?

24 A. I don't recall at this point.

1 MR. FRANKEL: I would like to mark
2 as Exhibit 12 a Charles George Trucking contact
3 record dated June 5, 1974.

4 (Exhibit 12 marked for
5 identification).

6 Q. (Hanging).

7 A. (Witness peruses document).

8 Q. Let me refer you to the top left of the
9 document where it refers to, "Name change." It
10 looks like, "National Polychemical changed to" or
11 "Stepan changed to." It's unclear exactly what it
12 says.

13 Was there a name change around June of
14 1974?

15 A. It could be. I don't recall.

16 Q. To the right of that it states, "Stepan
17 Chemical Co., Poly Chemical Dept."

18 A. Yes.

19 I previously testified there was a period
20 after the acquisition in '68 where the National
21 Polychemicals was continued to be used. And I
22 didn't recall how long that went on for. And you
23 showed me some other correspondence that indicated
24 that. So this is more of the same, I would say.

1 Q. Did National Polychemicals, Inc. become
2 part of the Stepan Polychemical Department at this
3 point in time, if you know?

4 MS. BECK: Objection.

5 A. I don't know. I do not recall that.

6 Q. On the "person contacted" line there is
7 "Terry" listed, and "Dick Picard," P I C A R D.
8 Do you know who Terry was?

9 A. Terry was a woman that worked in the
10 purchasing department.

11 Q. In the what?

12 A. Clerk. A clerk in the purchasing
13 department.

14 Q. What was her last name?

15 A. Pintrinch.

16 Q. Could you spell that?

17 A. P I N T R I N C H.

18 Q. Do you know where Terry Pintrinch is
19 today?

20 A. I have no idea. I have no idea.

21 Q. Who is Dick Picard?

22 A. He was a chemist that worked in the
23 application laboratory.

24 Q. Where is Dick Picard today?

1 A. I have no idea.

2 Q. Under instructions, it says, "Install
3 June 6, 1974, 9:00 to 10:00 a.m." Next sentence,
4 "Install 1-12 yd. sludge box for chemical
5 removal." Next paragraph, I believe it says,
6 "Installation -" but it's not clear; "have driver
7 go to main office, ask receptionist for Dick
8 Picard for location of container."

9 Can you tell me about this sludge box?

10 A. No idea. I have no idea what that refers
11 to.

12 Q. You don't know whether a sludge box was
13 placed at the Wilmington plant?

14 A. I have no idea about that.

15 MS. BECK: I believe that says
16 sludge bay.

17 MR. FRANKEL: It's somewhat
18 difficult to read. It may be sludge bay.

19 Q. Would your testimony change if I asked
20 you about a sludge bay?

21 A. No. I don't recall this at all. I have
22 no reference to what this might refer to.

23 Q. Do you have any knowledge concerning the
24 reference to chemical removal?

1 A. No.

2 Q. Can you tell me who at the plant at that
3 time -- this is June, 1974 -- would have known
4 about this sludge box?

5 MS. BECK: Objection.

6 A. I have no idea.

7 Q. No idea?

8 A. No.

9 Q. What was Dick Picard's position again at
10 this-time?

11 A. He worked in the laboratory --
12 applications laboratory.

13 Q. Do you know why he is a person who would
14 have been contacted or a person to contact?

15 A. No.

16 Q. Why he would be listed here?

17 MR. COSBY: Objection.

18 A. No.

19 MR. FRANKEL: I'd like to mark as
20 Exhibit 13 a contact record dated 9/30/74 and
21 9/31/74. It says Stepan Chemical on it at the
22 top.

23 (Exhibit 13 marked for
24 identification).

1 Q. (Handing).

2 A. (Witness peruses document).

3 Q. Have you had a chance to read this?

4 A. Yes.

5 Q. This contact record is dated September
6 30, 1974. It says, "Stepan Company" --

7 MS. BECK: It doesn't say "Stepan."
8 It says "Stepanch Com."

9 Q. It says, "C O M." I'm going to assume
10 that is referring to Stepan Company.

11 "City," it says, "W I L M." I will assume
12 that refers to Wilmington.

13 MS. BECK: Objection.

14 Q. Under "Instructions," it says, "1-12 Y D"
15 and then it says, "S L U G," "slug." I'm going to
16 assume that that refers to sludge for the purposes
17 of these questions.

18 MS. BECK: I'm going to object to
19 all the questions because I don't think those
20 assumptions are accurate.

21 MR. FRANKEL: Well, I think I'm
22 entitled to ask the witness if he knows whether or
23 not a twelve-yard sludge container was placed at
24 the facility on or around the end of September of

1 AFTERNOON SESSION

2 MR. FRANKEL: I'd like to mark as
3 Exhibit 14 a Charles George trucking contact
4 record.

5 (Exhibit 14 marked for
6 identification).

7 MR. FRANKEL: It's dated 10/6/75.

8 CONTINUED DIRECT EXAMINATION

9 BY: MR. FRANKEL:

10 Q. (Handing).

11 A. (Witness peruses document).

12 Q. Have you had a chance to look at that,
13 Mr. Riley?

14 A. Yes.

15 Q. Do you see where it says, "Stepan" or
16 "Stepan Chemical" under, "Name?"

17 A. Yes.

18 Q. What is Ames Street; is that where the
19 Wilmington facility was located?

20 A. Yes. It's an incorrect spelling; it's
21 E A M E S, but it's phonetically correct.

22 Q. Under, "Instructions," it says, "D E L
23 40-0"; does that mean anything to you?

24 A. It could mean anything.

1 Q. I'm asking whether it means anything to
2 you?

3 A. Not particularly.

4 Q. Do you know whether that could be a
5 forty-cubic-yard container or compactor?

6 A. I have no idea.

7 Q. On the bottom left-hand corner it states,
8 "I N S T, 10/6/75." Does that refresh your
9 recollection at --

10 A. No --

11 Q. -- all?

12 A. No, I don't know what that means, either.
13 I have no indication of that.

14 Q. Let me just ask you to let me finish my
15 question so that the court reporter can get it all
16 down.

17 A. I thought you were finished. I'm sorry.

18 Q. That's okay.

19 A. You are finished? You're awaiting an
20 answer?

21 Q. In general, I was just asking you to wait
22 until I finish so the court reporter can get it
23 down.

24 A. That doesn't mean anything to me.

1 and hauled the container away or hauled the
2 materials --

3 A. I had no knowledge of either.

4 Q. No knowledge of either.

5 Just to clarify, you have no knowledge of
6 who picked it up or of where it went; is that
7 correct?

8 A. That's correct.

9 MR. FRANKEL: I would ask for the
10 record that Stepan designate another individual
11 with respect to the 30(b)(6) notice on the issue
12 of materials picked up by the Charles George
13 Trucking Company from the Wilmington plant. I
14 believe it's covered by Subjects 5, 6, and 7 in
15 the 30(b)(6) notice, and I --

16 MS. BECK: You're lucky to have
17 anybody still at Stepan that knows anything about
18 what went on at the Eames Street facilities prior
19 to 1980.

20 MR. FRANKEL: I just point out for
21 the record that I believe Mr. Riley testified that
22 Anthony Green is still a Stepan employee.

23 BY: MR. FRANKEL:

24 Q. Is that correct, Mr. Riley?

1 A. That is correct.

2 MR. FRANKEL: And it appears to me
3 that Anthony Green is a person who would have
4 knowledge concerning this subject matter based
5 upon the documents.

6 MS. BECK: Mr. Frankel, make your
7 motion to the Court.

8 Q. In preparation for this deposition, Mr.
9 Riley, did you discuss these subject matters with
10 Mr. Green?

11 A. No.

12 Q. Did you discuss the subject of this
13 deposition with any other Stepan employees?

14 MS. BECK: Other than the attorneys?

15 MR. FRANKEL: Other than the
16 attorneys.

17 A. No.

18 Q. Mr. Riley, do you know whether or not any
19 plastic-like flakes or sticky liquid substances
20 were ever picked up by the Charles George Trucking
21 Company from the facility?

22 MR. COSBY: Objection.

23 A. I have no knowledge of either one.

24 Q. Do you know of any waste products that

1 looked like plastic-like flakes?

2 MS. BECK: Objection.

3 A. I have no recollection of anything
4 looking like flakes.

5 MS. HARRIS: Could I just ask if you
6 remove your hand from your mouth? I'm having
7 trouble understanding what you're saying.

8 Q. Mr. Riley, do you know whether barrels of
9 chemicals with red, white, black or green labels,
10 these would be hazardous or explosive labeling,
11 were ever picked up from the Wilmington plant by
12 the Charles George Trucking Company?

13 MS. BECK: Objection.

14 A. I have no knowledge of that.

15 Q. Do you know whether or not waste produced
16 by the Wilmington plant was ever placed in barrels
17 that had red, white, black or green labels on
18 them?

19 MS. BECK: Objection.

20 A. I have no knowledge.

21 Q. Can you tell me what employees at the
22 Wilmington facility would be familiar with the
23 type of containers used or the type of drums used
24 for the waste material produced at the facility?

1 MS. BECK: Objection.

2 Q. If you know?

3 A. I just testified I have no knowledge of
4 any waste being put into drums.

5 Q. And my question was, could you tell me --
6 I understand you have no knowledge. I'm asking
7 you what other employees of the Wilmington plant
8 would know?

9 MS. BECK: You're assuming waste was
10 put into drums, and I think he testified that he
11 didn't believe that happened. So that question
12 assumes a fact that's not in evidence and not
13 accurate.

14 MS. HARRIS: I don't think he
15 testified that it didn't happen. I believe he
16 testified that he had no knowledge.

17 MR. FRANKEL: I believe the record
18 will show it --

19 MS. BECK: You haven't established
20 it did occur, so I'm objecting to the question.

21 MR. FRANKEL: Let me make the
22 assumption in the question and the record will
23 reflect what the prior testimony was.

24 MS. BECK: My objection continues to

1 be to questions that assume facts that aren't
2 established.

3 BY: MR. FRANKEL:

4 Q. Do you know whether the Wilmington
5 facility ever placed waste chemical products in
6 drums at any time?

7 A. I have no knowledge they did.

8 Q. You have no knowledge that any waste
9 materials were ever placed in drums at the
10 facility?

11 A. No. I have no knowledge they did.

12 Q. Can you tell me if such -- if waste had
13 been placed in drums at the facility at any time
14 -- let me start with the late sixties and the
15 early seventies, can you tell me which job
16 positions at the facility, which persons would
17 have been familiar with that?

18 MS. BECK: Objection.

19 A. I have no idea. I have no knowledge and
20 I have no idea.

21 Q. What about after that period in the
22 mid-seventies or late seventies?

23 MS. BECK: Objection.

24 A. I have no knowledge and no idea.

1 Q. But you were the general manager of the
2 facility during some of that time, were you not?

3 A. Yes.

4 Q. And you can't tell me the job titles that
5 would have been involved had the facility placed
6 chemicals in drums?

7 MS. BECK: Objection.

8 Your questioning is based on pure
9 speculation that something happened that you
10 haven't established it happened.

11 MR. FRANKEL: I believe that --

12 MS. BECK: You can ask him who was
13 in charge of the disposal of waste, but who put
14 chemicals in drums, he doesn't have any
15 information that it was done.

16 MR. FRANKEL: My question is, if the
17 employees had placed waste into drums, which
18 employees would have been familiar with it?

19 MS. BECK: It's pure speculation.

20 I object.

21 A. I have no idea.

22 Q. Were you generally familiar with the job
23 duties of the employees at the facility at the
24 time you were general manager?

1 A. At what point?

2 Q. When you were general manager.

3 What was the first year you were general
4 manager?

5 A. 1972.

6 Q. At that time, were you familiar with the
7 responsibilities of the employees at the plant?

8 A. Possibly. I'm not sure I made it clear
9 to you the structure. The plant was reporting to
10 Northfield at this time. As general manager, I
11 had sales, marketing, research, and administration
12 reporting to me. I had no direct reporting with
13 manufacturing from this period on.

14 Q. How about before 1972; from '68 to '72?

15 A. From '70 back, I did.

16 Q. So from '68 to '72 --

17 A. '68 to '72.

18 Q. You did oversee the manufacturing
19 operation?

20 A. Yes.

21 Q. During that period of time, were you
22 familiar with the general job duties of the
23 employees at the plant?

24 A. Not one hundred percent. There was a

1 structure with myself, the plant manager and the
2 supervisor.

3 Q. Who were the persons that reported
4 directly to you at that time period?

5 A. Ron McBrien was the plant manager.

6 Q. Who reported to Ron McBrien?

7 A. There were four or five supervisors that
8 ran the plant.

9 Q. Who were those supervisors?

10 A. I can remember Howard Moorman, who was in
11 charge of shipping and receiving. Donald Court
12 was the first shift supervisor in manufacturing.
13 Richard Cantwell was the maintenance supervisor.

14 Q. Do you know where Richard Cantwell is
15 now?

16 A. I think he's in Florida, but I have no
17 address for him.

18 Q. Who were the other supervisors?

19 A. I don't recall their names.

20 Q. Going forward in time somewhat to the
21 early 1970s, can you tell me the names of the
22 supervisors at that point?

23 A. The same ones that I mentioned would have
24 been there.

1 Q. Did there come a time when some new
2 supervisors came on board and the old ones left?

3 A. Moorman passed away sometime in the
4 eighties, I believe.

5 MR. COSBY: Off the record.

6 (Discussion off the record).

7 MR. FRANKEL: I'd like to mark as
8 Exhibit 15 a memorandum from William Gaughan, it
9 looks like -- G A U G H A N, to Virginia Hunt.

10 MS. HARRIS: For the record, before
11 we start asking about this document, I believe
12 there may have been a stipulation placed on the
13 record before I came into the deposition room that
14 Plaintiffs' objection would be as to both
15 Plaintiffs, and I would just want to say that that
16 will apply during the cross-examination, but
17 during Mr. Frankel's examination, if I object, it
18 is my objection to a question.

19 (Exhibit 15 marked for
20 identification).

21 Q. (Handing).

22 A. (Witness peruses document).

23 Q. Mr. Riley, this document refers in
24 Paragraph 3 to an enforcement action brought by

1 the Office of the Attorney General which resulted
2 in Stephan, S T E P H A N, Chemical Company paying
3 a \$16,000 fine. Are you familiar with this
4 enforcement action?

5 A. No, I don't remember this.

6 Q. You don't know anything about this?

7 A. I don't remember this.

8 MR. FRANKEL: I'd like to mark as
9 Exhibit 16 a memorandum entitled, "Charles
10 George," at the top of it. Then it says, "R. B.
11 McBrien, 12/18/85."

12 (Exhibit 16 marked for
13 identification).

14 Q. (Handing).

15 A. (Witness peruses document).

16 Q. Have you had a chance to review that?

17 A. Yes.

18 Q. Let me represent to you that I believe
19 this is an interview memorandum provided to the
20 United States Environmental Protection Agency by
21 Olin Corporation just so you'll know what it is.

22 Did Mr. McBrien take a position with Olin
23 Corporation after Olin purchased the Wilmington
24 plant?

1 A. Yes. He continued to run the plant as
2 plant manager.

3 Q. Do you know if he is still running the
4 plant?

5 A. The plant is gone.

6 Q. Could you tell me when the plant ceased
7 operation?

8 A. '86.

9 Q. What happened at that point?

10 A. I don't know, but they shut the plant
11 down and stopped production and leveled the site.

12 Q. So from 1980 to 1986, the plant was
13 operated by Olin Corporation?

14 A. That's correct.

15 Q. Let me refer you to the parties listed at
16 the end of the memo where it says, "List of key
17 employees to talk to." Do you know who John Rose
18 is?

19 A. He was a manager for quality control.

20 Q. During what period of time?

21 A. He was there a long time ago; '57 until
22 1986, probably.

23 Q. What did the manager for quality control
24 do?

1 A. He managed the laboratory that assayed
2 the products as they were made to be sure they
3 were within the specifications as agreed upon with
4 the customers.

5 Q. What did the Wilmington plant do with
6 product that was not -- that did not meet
7 specifications?

8 A. It was all reworked.

9 Q. Did you refer to that as off-spec.
10 product?

11 A. Yes.

12 Q. When you say it was reworked, do you mean
13 it was recycled?

14 A. Yes.

15 Q. Do you know whether any of that was
16 disposed of as waste material?

17 A. I have no knowledge of it ever being
18 disposed of. It was pretty expensive.

19 Q. Do you know where John Rose is today?

20 A. No.

21 Q. How about Pat Kane?

22 A. Pat Kane was a production supervisor, and
23 then he was a maintenance supervisor.

24 Q. During what period of time?

1 A. He would have been a maintenance
2 supervisor in the 1966 to 1986 period -- '76 to
3 '86 period.

4 Q. And what was his position prior to 1976?

5 A. He was a production supervisor.

6 Q. Do you know where Pat Kane is today?

7 A. No, I have no idea.

8 Q. Who is Bill Landry?

9 A. Bill Landry was a worker in the plant who
10 then became a sales coordinator in the sales
11 office.

12 Q. What type of work did he do at the plant?

13 A. He was in charge of dealing with the
14 customers and coordinating shipments, sales.

15 Q. During what period of time?

16 A. Probably from the early seventies through
17 '86 when the plant closed.

18 Q. Would he have been familiar with the
19 types of waste that were being disposed of at the
20 plant?

21 A. Not really. That wasn't his job. He was
22 an inside sales coordinator.

23 Q. Do you know where Bill Landry is today?

24 A. No, I don't.

1 Q. Who was Mike Marciano?

2 A. He was a chemical operator and then he
3 was a fork-truck driver in the warehouse.

4 Q. When did he start as a chemical operator?

5 A. Oh, probably in the late fifties.

6 Q. How long did he hold the position of
7 chemical operator?

8 A. Probably ten, fifteen years. Probably
9 fourteen, fifteen years. I think he went in the
10 warehouse in the seventies some time.

11 Q. What were his duties as chemical
12 operator?

13 A. He was making the products of the
14 company. Discharging raw materials to vessels,
15 seeing that the materials were reacted properly;
16 that the filtration and the drying was
17 accomplished.

18 Q. Would he have been familiar, then, with
19 the chemical processes employed at the plant?

20 A. Certain ones.

21 Q. Would he have been --

22 A. I'm not sure he worked in every area of
23 the plant.

24 Q. Would he have been familiar with the

1 waste or by-products of those chemical processes?

2 A. Not necessarily. He was an hourly man.

3 He wasn't a technical man.

4 Q. You said that at some point in time his
5 position was changed to that of a forklift
6 operator?

7 A. In the warehouse.

8 Q. Could you tell me what types of things he
9 did at the warehouse?

10 A. He would be picking products from the
11 warehouse under orders and loading trucks with it.

12 Q. This was finished product?

13 A. Yes.

14 Q. And when did he start in that position?

15 A. I'm not really sure. I would say in the
16 seventies.

17 Q. Sometime in the seventies?

18 A. Yes.

19 Q. But you couldn't place it?

20 A. No.

21 Q. Early seventies or late seventies?

22 A. I couldn't place it.

23 Q. Do you know where Mike Marciano is today?

24 A. No.

1 Q. I'm going to refer you to various
2 sentences, parts of this memo --

3 A. Sure.

4 Q. -- and ask you whether you can give me
5 your knowledge concerning the issues discussed in
6 the memorandum.

7 The first point states, "Charles George
8 Trucking has handled trash from Wilmington since
9 1964."

10 I believe you testified previously that the
11 relationship with Charles George began in the late
12 1950s?

13 A. I think I testified it could have started
14 back then. I couldn't be definitive of what year
15 it was.

16 Q. So it might have been late fifties or
17 early sixties?

18 A. Right.

19 Q. The second point indicates that, "Since
20 Olin purchased the plant in September, 1980, only
21 plant trash has been picked up by C. G. No
22 chemical waste."

23 Let me ask you again whether this refreshes
24 your recollection concerning whether prior to the

1 September, '80 purchase, chemical waste may have
2 been picked up by the Charles George Trucking
3 Company --

4 A. I think I testified already that calcium
5 sulfate was picked up.

6 Q. How about chemical waste other than
7 calcium sulfate?

8 A. I don't know of any other waste that
9 would be picked up by Charles George. Although,
10 I've testified that once a year there was a
11 container of drums that went out of the plant. I
12 have no knowledge what were in the drums, whether
13 they were empty or filled.

14 Q. And the third sentence or portion of the
15 memorandum states that, "C. G.," which I'm going
16 to assume is Charles George Trucking, "picked up
17 other waste for Stepan. In 1970, calcium sulfate
18 from wastewater treatment was picked up by C. G.
19 until lagoons were built."

20 MR. COSBY: I'm going to object.

21 A. I think that date is probably wrong.
22 It's a true statement, but I think your other
23 exhibits indicated that it was probably later than
24 1970; that it was '71 or '72.

1 Q. And is that the calcium sulfate that the
2 Charles George Tucking picked up, I believe you
3 said, for a period of eighteen months to
4 twenty-four months?

5 A. Yes.

6 Q. Let me refer you to the fourth bullet on
7 this memo.

8 A. What is a bullet?

9 Q. A little circular -- we call them
10 bullets.

11 "In 1976, offspec Wytox (312 or 345) was
12 picked up by C. G. Disposal unknown, but believed
13 to be in New York."

14 Could you tell me what off-spec. Wytox was?

15 A. Wytox 312 was tris nonylphenyl phosphite.

16 Q. Could you spell that?

17 A. T R I S, N O N Y L P H E N Y L,
18 phosphite, P H O S P H I T E. That's a plastic
19 additive that's used to protect plastics and
20 rubber against degradation, and it is an
21 FDA-approved item for use in items that come in
22 contact with food. I can't comment where it was
23 disposed of in 1976.

24 Q. What was the difference between the 312

1 and 345?

2 A. The 345 is based on 312. It's a
3 different product in the same line.

4 Q. Is this Wytox the same product you
5 testified to previously that I referred to as
6 Product 3?

7 A. Yes.

8 Q. Why was this Wytox viewed as off-spec.?

9 A. I have no idea. I have no information on
10 that.

11 Q. Do you have any knowledge concerning
12 off-spec. Wytox being picked by the Charles George
13 Trucking Company?

14 MR. COSBY: Objection.

15 A. No.

16 Q. Do you have any knowledge concerning this
17 reference to disposal in New York?

18 A. No.

19 Q. Let me refer you to the fifth bullet. It
20 says -- the last part -- it says, "Many drums
21 stored - Olin disposed of in secure landfill after
22 purchase."

23 MS. BECK: It's only fair to read
24 the whole thing.

1 Q. "Other wastes prior to 1980 were recycled
2 to extent possible. Does not recall any disposal.
3 Many drums stored - Olin disposed of in secure
4 landfill after purchase."

5 A. What that refers to is, at the time of
6 selling a plant it's like selling a house. You
7 always have things that have accumulated.
8 Obsolete products, lines you've gone out of.
9 Everybody hides things like you hide things in
10 your cellar. So when a plant is sold, the person
11 selling usually has to pay for getting rid of this
12 type of material, or the buyer in many cases will
13 get rid of it and bill the seller for it.

14 Q. Do you know what materials were stored in
15 these drums?

16 A. I just remember that there were a number
17 of drums and that they were basically obsolete
18 materials.

19 Q. By obsolete materials, do you mean
20 products -- finished products that were not sold?

21 A. That's right. They would have been in
22 spec., but they had not been sold for one reason
23 or another.

24 Q. Would these drums also have contained

1 waste products?

2 A. I know of no cases where there were any
3 wastes disposed of.

4 Q. Can you tell me the types -- specific
5 types of products that would have been stored in
6 these drums?

7 A. I can't be specific.

8 Q. Can you tell me whether any of these
9 drums were ever taken off site prior to the Olin
10 purchase?

11 MR. COSBY: Objection.

12 MS. BECK: Objection.

13 A. I have no knowledge they were.

14 Q. Do you know whether or not any of these
15 drums were placed in the thirty-yard container
16 that you've testified to previously?

17 MR. COSBY: Objection.

18 MS. BECK: Objection.

19 He testified these are the drums that were
20 at the plant when Olin purchased the plant.
21 That's the category he's testifying to. You're
22 confusing this with something else.

23 MR. FRANKEL: Let me back up and try
24 to clarify it.

1 Q. I believe you testified a couple of
2 minutes ago that certain substances were placed in
3 drums at the Wilmington plant?

4 MS. BECK: Objection.

5 A. I didn't testify to that. I said there
6 were products in drums that were -- could be
7 obsolete, and that they built up and that they
8 were sent out when the company was sold.

9 Q. These products that were in these drums,
10 how did they get into the drums?

11 A. They were stored in drums.

12 Q. Who stored them in the drums -- the
13 Wilmington plant?

14 A. Yes.

15 Q. So at one point in time is it fair to say
16 someone at the Wilmington plant put these products
17 into the drums?

18 A. Right.

19 Q. When did that occur?

20 MR. COSBY: Objection.

21 A. I have no knowledge.

22 Q. You have no knowledge of these products
23 being put into drums at any time?

24 A. No. They were putting products into

1 drums for thirty years. That was a known product
2 form was to put products into these drums. And
3 then put them in the warehouse as inventory.

4 Q. So is it your testimony that the
5 Wilmington plant started to put products in these
6 drums thirty years in the late 1950s?

7 A. Early 1950s.

8 Q. Referring to the drums from the late
9 1950s and early 1960s, what happened -- did those
10 drums sit at the Wilmington facility until the
11 Olin purchase in 1980?

12 MR. COSBY: Objection.

13 MS. BECK: Objection.

14 MR. CHEFITZ: Objection.

15 A. I have no information on that. No
16 information on that.

17 Q. So are you saying that --

18 A. I --

19 Q. I'm just trying to understand. Your
20 testimony is that for a thirty-year period,
21 materials were placed in drums at the Wilmington
22 plant, and all I'm trying to understand is what
23 happened to those drums.

24 MS. BECK: I believe he testified

1 they were the inventory.

2 A. They were the inventory.

3 MS. BECK: They were sold. That's
4 how they make money.

5 A. A lot of the Wilmington products were
6 sold in drums. Many of them were packaged in
7 drums and sold in drums for thirty years.

8 Q. Let me refer you to the next portion
9 here. It says, "Lab chemicals were disposed of
10 annually prior to 1980, but Ron does not know how.
11 Retained product samples were reworked." Do you
12 have any knowledge concerning the annual disposal
13 of lab chemicals?

14 A. No.

15 Q. You previously testified that on an
16 annual basis a thirty-yard container was taken to
17 the facility by the Charles George Trucking
18 Company, at which time certain drums were removed.

19 MR. CHEFITZ: Objection.

20 Q. Can you tell me whether or not these lab.
21 chemicals were part of the materials that were
22 removed in those drums?

23 MR. COSBY: Objection.

24 A. I have no knowledge of that.

1 Q. Let me go back to the drum storage to be
2 sure I understand that. Were off-spec. products
3 placed in drums during the time that you were
4 working --

5 A. They could have been.

6 Q. Let me finish the question, please.

7 Were off-spec. products placed in drums
8 during the time period you were at the plant?

9 A. They could have been.

10 MR. COSBY: Objection.

11 Q. What did the plant do with the off-spec.
12 materials placed in drums?

13 MS. BECK: Objection.

14 MR. COSBY: Objection.

15 MS. BECK: Asked and answered.

16 MR. COSBY: Also assumes they were
17 put in drums when he said, "they could have been."

18 A. They were recycled into good product.

19 Q. All of the off-spec. product?

20 A. Generally.

21 Q. When you say, "generally," were there
22 exceptions?

23 A. I can't think of any.

24 Q. Did there come a time in 1980 when Stepan

1 sold its Wilmington facility to the Olin
2 Corporation?

3 A. That is correct.

4 Q. Do you know when the sale occurred?

5 A. October of 1980.

6 Q. Could you tell me the general terms of
7 the transaction?

8 MS. BECK: Objection.

9 There is a contract and that speaks for
10 itself.

11 MR. FRANKEL: I request that a copy
12 of that contract be produced if it's in Stepan's
13 possession. I don't believe we've received it.

14 MS. BECK: It has been produced and
15 it's been marked, "Confidential." It was faxed to
16 you on Tuesday -- not faxed -- Federal Expressed
17 to you on Tuesday.

18 MR. FRANKEL: This past Tuesday?

19 MS. BECK: Yes.

20 MR. FRANKEL: Well, since I've been
21 here doing depositions this week I haven't seen
22 this document.

23 MS. HARRIS: Do you have another
24 copy of it?

1 MS. BECK: No, I don't.

2 MR. FRANKEL: Do you have a copy
3 here today?

4 MS. BECK: No.

5 MR. FRANKEL: I will continue
6 questioning concerning this transaction when the
7 deposition resumes, since obviously I'm not in a
8 position to do so at this point without having
9 seen a copy of the contract.

10 MS. BECK: Well, let me state for
11 the record that the contract was made available to
12 you in a timely manner before this deposition, so
13 I would object to that.

14 MR. FRANKEL: Well, again, just for
15 the record I requested on numerous occasions that
16 all of the documents be Federal Expressed to me
17 prior to the deposition, and I believe two weeks
18 ago documents were Federal Expressed to me, but
19 those documents did not include this contract.

20 MS. BECK: That's because I obtained
21 the contract last Friday and brought it to Boston
22 on Monday and I Federal Expressed it to you on
23 Tuesday, so if you couldn't get it between Tuesday
24 and Friday, that's certainly not this defendant's

1 fault.

2 MR. FRANKEL: Well, the record
3 speaks for itself on this issue.

4 BY: MR. FRANKEL:

5 Q. Let me refer you to the drums we talked
6 about earlier that were left at the Wilmington
7 facility at the time of the sale to Olin.

8 Do you know what was contained in those
9 drums?

10 A. No.

11 Q. Do you know how many there were?

12 A. No.

13 Q. Do you know whether or not any agreement
14 was reached between Stepan and Olin concerning
15 payment for the removal of those drums?

16 A. I have no knowledge of that.

17 Q. Where were you located at the time of
18 this transaction?

19 A. I was a resident of Northfield, Illinois.

20 Q. Were you working for the Stepan Company?

21 A. Yes.

22 MR. FRANKEL: Let me mark as Exhibit
23 17 a memorandum which says, "Charles George," at
24 the top of it, and which states, "Mike Marciano,

1 12/18/85" below that. And I ask the witness to
2 take a look at it.

3 (Exhibit 17 marked for
4 identification).

5 Q. (Handing).

6 A. (Witness peruses document).

7 Q. Is this the same Mike Marciano?

8 A. I have no idea.

9 Q. Do you know whether Mike Marciano was
10 employed by the Olin Corporation after it
11 purchased the Wilmington facility?

12 MR. COSBY: Objection.

13 A. I believe he was for a while.

14 Q. Let me refer you to the first bullet. It
15 says, "Mike has been at Wilmington since 1958.
16 Production first, warehouse since 1972."

17 Can you confirm that that's -- those are
18 the dates that he began at the plant?

19 MS. BECK: Objection.

20 Q. That that's the day he began at the
21 plant?

22 A. No, I can't confirm it.

23 Q. How about switching to the warehouse in
24 '72; can you confirm that?

1 A. No.

2 Q. It is generally consistent with your
3 prior testimony; isn't it?

4 A. Generally consistent, yes.

5 Q. Let me refer you to the second bullet.
6 It says that, "Olin has not allowed drums or
7 chemicals in plant compactor or dumpsters since
8 purchased in 9/80."

9 Does that refresh your recollection at all
10 concerning any of these -- either the compactor or
11 the dumpsters for the period prior to the
12 purchase?

13 MS. BECK: Objection.

14 A. I don't know what that means. I have no
15 knowledge of what that means.

16 Q. Let me refer you to the third bullet. It
17 says, "Until Olin purchase, all chemical waste was
18 drummed and picked up by Charles George Trucking.
19 Do not know where disposed. Probably Tyngsboro."

20 Does this memorandum refresh your
21 recollection concerning whether or not chemical
22 waste was picked up by the Charles George Trucking
23 Company?

24 MS. BECK: Objection.

1 A. No.

2 Q. So your testimony is that you don't know
3 whether this is correct or incorrect? You just
4 don't know?

5 A. I have no knowledge that this is correct
6 or incorrect.

7 Q. Let me refer you to the periodic plant
8 clean-ups to dispose of drummed waste. Does that
9 refresh your recollection at all concerning
10 whether the annual pick-up that you testified to
11 earlier involved pick-ups of drummed waste?

12 MS. BECK: Objection.

13 A. Would you repeat that question?

14 Q. My question was, I believe you testified
15 previously that there was an annual pick-up of
16 drums in a thirty-yard container?

17 A. Correction; in a container. I didn't
18 testify to what footage of the container.

19 Q. In a container.

20 What I'm asking you is, having reviewed
21 this memorandum, does that refresh your
22 recollection any concerning whether or not there
23 was drummed waste in that container?

24 MR. COSBY: Objection.

1 A. No. I have no knowledge about drummed
2 waste in the container.

3 Q. The next bullet says, "30 to 50
4 fifty-five-gallon drums stacked in rollofs. One
5 per day for 2-4 days."

6 Do you have any recollection of
7 approximately thirty to fifty, fifty-five-gallon
8 drums being stacked in rollofs for a period of
9 two to four days?

10 MS. BECK: Objection.

11 A. No.

12 Q. The next bullet refers to, "Occurred
13 several times a year. No set schedule. Some
14 years, once; other years, more."

15 A. I have no knowledge.

16 MR. COSBY: Objection.

17 Q. No knowledge?

18 A. No.

19 Q. Do you know if there is anyone presently
20 employed by Stepan who would have knowledge
21 concerning the contents of the drums that were
22 placed in that container --

23 MS. BECK: Objection.

24 Q. -- for the annual pick-up?

1 MS. BECK: Objection.

2 MR. COSBY: Objection.

3 A. No.

4 MR. FRANKEL: I'd like mark as
5 Exhibit 18 the memo from R. J. McBrien to V.
6 Norwood dated August 29, 1983, and attached to it
7 is a three-page list of products and raw
8 materials.

9 (Exhibit 18 marked for
10 identification).

11 Q. (Handing).

12 A. (Witness peruses document).

13 Q. Have you had a chance to look that over,
14 Mr. Riley?

15 A. Yes.

16 Q. Referring to the first page of this
17 exhibit, it appears to be a memo from Ronald
18 McBrien which states, "Attached is a listing of
19 the current products/raws and others which I can
20 recall from memory (since 1966). There are
21 several more products which I have identified in
22 old sales booklet from the '50's. Several
23 long-term supervisory and technical employees are
24 attempting to recall details on their composition.

1 When this latter information is available, I'll
2 send it to you."

3 What I'd like you to do, Mr. Riley -- I
4 apologize for this process of being somewhat
5 tedious, but by the nature of this type of case,
6 to get into the nitty-gritty details of these
7 things -- I'm going to ask you whether or not you
8 can confirm for me whether or not these were
9 products produced by the Wilmington plant, and I
10 would also ask you to comment on the raw materials
11 listed, the by-products, and the remarks.

12 MS. BECK: You're not going to go
13 over products he's already discussed in length
14 this morning?

15 MR. FRANKEL: No, I'm not.

16 Q. I just ask you to, if you've already
17 testified to it, please tell me.

18 MR. CHEFITZ: Do we have any time
19 period on this question?

20 MS. BECK: How long it can take to
21 answer it?

22 MR. CHEFITZ: May we have a time
23 period? Were these things ever made or ever used?
24 For what time period?

1 MR. FRANKEL: This is a memorandum
2 from Mr. McBrien to Mr. Norwood at Olin in which
3 Mr. McBrien sets forth all of the -- appears to be
4 a memorandum where he sets forth all of the
5 materials produced. Mr. McBrien indicates under,
6 "Remarks," the time period for the production of
7 the product. So when we go through the products
8 the record will reflect what the time period was.

9 MR. CHEFITZ: Do you want the
10 witness to reflect what it is, or would you like
11 him to answer the question?

12 MS. BECK: I object to the
13 characterization that this memo tells you when
14 these products are manufactured, because it really
15 doesn't.

16 MR. CHEFITZ: I renew my question.

17 MR. FRANKEL: The document --

18 MS. BECK: Just proceed, Mr.
19 Frankel.

20 MR. FRANKEL: I suggest under the
21 "Remarks" section it often indicates the time
22 period for the production.

23 THE WITNESS: Some of this is apples
24 and oranges. You've got by-products and waste

1 mixed together. That doesn't go along,
2 necessarily, with each other.

3 BY: MR. FRANKEL:

4 Q. Let me go product by-product and you can
5 tell me what you know.

6 The first one is azodicarbonamide?

7 A. Azodicarbonamide.

8 Q. Kempore is the trade name for that?

9 A. Yes.

10 Q. Is this Product No. 2 that you testified
11 to concerning previously?

12 A. Yes.

13 MS. HARRIS: Off the record.

14 (Discussion off the record).

15 (Whereupon, a brief recess was
16 taken).

17 CONTINUED DIRECT EXAMINATION

18 BY: MR. FRANKEL:

19 Q. Let's start with Product No. 1 on this
20 list on the first page of the list. Is this the
21 product that you testified to previously, as I
22 believe, Product No. 2?

23 A. Yes.

24 Q. I think in your earlier testimony you did

1 not mention sodium bromide or sodium sulfite as
2 raw materials.

3 A. Sodium bromide was used in a very small
4 catalytic amount.

5 Q. What about the sodium sulfite?

6 A. That was used in a very small amount,
7 too.

8 Q. So in addition to the four raw materials
9 you testified to previously, you would add sodium
10 bromide and sodium sulfite?

11 A. If you wish. They are very small.

12 Q. I need your testimony on it, not whether
13 or not I wish it.

14 A. You said, would I add it to the list.
15 I'm saying I would add it to a list only if
16 someone requested that even small percentages of
17 chemicals be added to the list.

18 Q. Let me just ask you whether or not
19 sodium --

20 A. In other words --

21 Q. I'll ask you the direct way. Was sodium
22 bromide one of the raw materials for this product?

23 A. The answer is, no.

24 Q. No?

1 A. No.

2 Q. So this -- you believe this list to be
3 incorrect?

4 A. Sodium bromide is not the raw material.
5 It's a catalyst, and there is a difference between
6 a catalyst and a raw material.

7 Q. Could you tell me the difference?

8 A. A catalyst promotes the reaction that is
9 going on. It doesn't become part of the product.
10 It doesn't become changed. I think the request
11 that was given to me was for raw materials that we
12 used.

13 Q. You're correct; that's what I did ask you
14 previously.

15 A. And I think the request was for raw
16 materials. So that's why it wouldn't be in there.

17 Q. So, sodium bromide was a catalyst, as
18 opposed being a raw material?

19 A. Yes.

20 Q. What about sodium sulfite; was that a
21 catalyst?

22 A. No; but it's used with the catalyst.
23 Again, it's not a raw material.

24 Q. Were there any other catalysts in this

1 product?

2 A. No.

3 Q. Let me turn to the by-products/waste
4 column.

5 Can you tell me whether or not ammonia was
6 a by-product or a waste of this process?

7 A. At what point? What time period?

8 Q. Why don't you tell me whether it was a
9 by-product or a waste at any time period, and then
10 you can explain to me what happened over time.

11 A. The process was changed slightly over
12 time where ammonia is available and then it is
13 converted into ammonium sulfate. At one point
14 ammonia was being recovered from the process
15 instead of being converted into the sulfate, but
16 at the end of the process free ammonia would never
17 have been in the waste stream because of the high
18 sulfuric acid content. You would always have
19 ammonium sulfate.

20 Q. So ammonia would never be in the
21 effluent?

22 A. No.

23 Q. It would not have been in the effluent
24 that entered the waste treatment plant?

- 1 A. That's correct.
- 2 Q. What about HCl, hydrochloric acid?
- 3 A. That isn't listed on azodicarbonamide.
- 4 Are you still --
- 5 Q. Is it anhydrous hydrochloric acid?
- 6 A. Where are you now?
- 7 Q. I'm on the by-products/waste.
- 8 A. NaCl? HCl? I see.
- 9 Q. Is HCl hydrochloric acid?
- 10 A. Yes. There wouldn't be any hydrochloric
- 11 acid.
- 12 Q. Either as a by-product or a waste?
- 13 A. No.
- 14 Q. And is it your testimony that this list
- 15 is incorrect?
- 16 A. Yes.
- 17 Q. Where it says anhydrous, is that
- 18 anhydrous hydrochloric acid?
- 19 A. That's anhydrous hydrogen chloride.
- 20 That's a gas. There wouldn't be any anhydrous
- 21 hydrogen chloride in this system.
- 22 Q. So you believe this is incorrect?
- 23 A. Yes.
- 24 Q. The next substance is HBr, is that

1 hydrogen bromide?

2 A. Yes.

3 Q. Was that a waste product or a by-product?

4 A. No. It was part of the catalyst system.

5 Q. How about NaBr, is that sodium bromide?

6 A. Yes.

7 MR. FRANKEL: Off the record.

8 (Discussion off the record).

9 A. I might add Ron McBrien is a chemical
10 engineer and he's not a good a chemist, so he
11 wouldn't be as sharp on some of these things as a
12 chemist might be.

13 BY: MR. FRANKEL:

14 Q. But did he have a scientific background?

15 A. He did, yes, but on that sodium bromide
16 catalyst, the way the reaction ran, the bromide --
17 sodium bromide supplied bromine in catalytic
18 amounts and the sodium chlorate oxidized the
19 sodium bromide to bromine and at the end of the
20 reaction you added the sodium sulfite to stop the
21 reaction, and bring the bromine back to sodium
22 bromide. So you would never have HBr in the
23 system in the by-product stream, if you understand
24 that.

1 I'm not sure you do.

2 Q. Someone reading the transcript later on.

3 A. More people should take chemistry than
4 law school. You know, there are something like
5 thirty percent more Ph.D.s in the last thirty
6 years in chemistry, and there are like five
7 hundred percent more lawyers.

8 (Discussion off the record).

9 BY: MR. FRANKEL:

10 Q. Let me ask you about the Na₂SO₄.

11 A. Sodium sulfate.

12 Q. Was the sodium sulfate a by-product or
13 waste?

14 A. Yes.

15 Q. I believe you testified to that
16 previously?

17 A. Yes.

18 Q. What about the sulfuric acid, H₂SO₄, at
19 the bottom of the list?

20 A. That was in the by-products.

21 Q. I don't believe you testified to that one
22 previously; was that a waste or --

23 A. I think I testified that the stream was a
24 strong sulfuric acid waste stream.

1 Q. Was this one of the waste streams that
2 went into the wastewater treatment plant?

3 A. Yes.

4 Q. Did it contain ammonia sulfide?

5 A. Ammonia sulfide?

6 Q. Yes.

7 A. That isn't listed here, is it?

8 Q. I don't believe so.

9 A. No, I don't believe so. There is no way.

10 Q. How about ammonium sulfite, I T E?

11 A. No. No chance.

12 Q. Do you happen to know the difference
13 between by-products and wastes set forth in this
14 memorandum?

15 MS. BECK: Objection.

16 A. No, I don't know. I don't know what that
17 means.

18 Q. The "Remarks" indicates, I can't read the
19 first word, "process operated 1956 - present."

20 Can you confirm that this process took
21 place from about the late fifties to the present
22 time? Present being 1983.

23 A. That's generally true.

24 Q. Let me refer you to the second substance

1 listed under "Product." How does that differ from
2 number one, if you can tell me?

3 A. Azodicarbonamide, that's the same
4 product. Kempore is the trade name.
5 Azodicarbonamide is the trivial name.

6 Q. From looking at this, can you tell why
7 these are separated out into separate categories?

8 A. No. There is no reason for them to be.
9 The Kempore is the trade name. It means it formed
10 pores in rubber media.

11 Q. Let me refer you to the remarks section
12 where it says, "Process used up to 1967 used
13 sodium dichromate in lieu of sodium chlorate."
14 Does that indicate to you why this would be listed
15 separately?

16 A. Not really. That "Remarks" section is
17 indicating the type of oxidation system was
18 changed in 1967.

19 Q. Would that have changed the waste stream
20 at all?

21 A. Yes, it probably would have.

22 Q. Could you tell me how?

23 A. You would have had chromium sulfate in
24 the waste stream originally when you were running

1 with sodium dichromate.

2 Q. Any other difference in the waste stream?

3 A. No.

4 Q. Let me refer you to the third product.

5 I'm having a little trouble reading it. Can you
6 read that?

7 A. Dinitrosopentamethylene tetramine.

8 Q. That's Product No. 1, isn't it?

9 A. Yes.

10 Q. I believe when you testified concerning
11 this product earlier. You said that the raw
12 materials were hexamethylenetetramine, sodium
13 nitrite and hydrochloric acid?

14 A. That's correct.

15 Q. There are several other substances listed
16 here under "Raw material," and I was wondering
17 whether you could tell me whether or not they were
18 also raw materials.

19 First is formaldehyde?

20 A. Well, at one time the
21 hexamethylenetetramine was purchased. And then it
22 was made on-site. And to make it on-site you used
23 formaldehyde and ammonium hydroxide.

24 Q. At what -- during what period of time was

1 the hexamethylenetetramine produced on site?

2 A. Starting in the mid-sixties probably.

3 Q. And continuing until what date?

4 A. I know it was done through '76.

5 Q. What is NH₃?

6 A. That's ammonia.

7 Q. That's ammonia?

8 A. Yes.

9 He's indicating here when they started
10 recovering ammonia from the azo process. They
11 were using it as a by-product -- using it as a raw
12 material to make the hexamethylenetetramine. So
13 that's a case of a by-product being recycled and
14 used to make another product.

15 Q. What about ammonium hydroxide; was that
16 also a raw material?

17 A. Yes -- that's incorrect. It was real
18 ammonia that was being used.

19 Q. Ammonia hydroxia?

20 A. Ammonia; the compound ammonia. That
21 ammonium hydroxide shouldn't be in there.

22 Q. That's incorrect?

23 A. Yes.

24 Q. What about rubber processing oil?

1 A. That was an additive that was added to
2 the product while it was being made. A small
3 amount of rubber processing oil was added to the
4 batch.

5 Q. Let me turn to the "By-products/Waste"
6 column. I believe you indicated earlier that
7 sodium chloride and sodium nitrite were the --
8 were both waste material; is that correct?

9 A. Well, coming off the process, but the
10 nitrite would have been converted to sulfate in
11 the equalization tank in the waste treatment
12 plant.

13 Q. Would any of the sodium nitrite have
14 contaminated the gypsum cake?

15 A. No.

16 Q. Why do you say that?

17 A. Because it would have been converted to
18 the sulfate before the -- as the calcium was
19 added. It would have converted to the sulfate
20 when the streams were mixed with the sulfuric
21 acid.

22 Q. Would there have been small amounts of
23 the sodium nitrite in the calcium sulfate?

24 A. I doubt very much that there would have

1 been any.

2 Q. Let me ask you the same question with
3 respect to the formaldehyde; would any of the
4 formaldehyde have contaminated or found its way
5 into the gypsum cake?

6 A. I don't believe so.

7 Q. Why do you say that?

8 A. I personally never smelled any
9 formaldehyde. Formaldehyde is a gas, and if it's
10 available in trace amounts, you can smell it.
11 There was no odor coming off that gypsum cake.
12 The filter was in a building and you precipitated
13 it and filtered it, and you would have smelled
14 anything like formaldehyde.

15 Q. Even if there were trace amounts in the
16 gypsum cake?

17 A. You would smell it.

18 Q. Is it possible for a gas like
19 formaldehyde to be bound up in a gypsum cake-type
20 material without being released?

21 A. Not normally, no.

22 Q. Are there certain circumstances where
23 that could occur?

24 MS. BECK: Objection.

1 A. I don't know of any.

2 I think this is conjecture on McBrien's
3 part that formaldehyde would have been there.

4 Q. Let me turn to the next product which is
5 the trisnonylphenyl phosphite, TNPP. I believe
6 you testified concerning this previously as
7 Product 3?

8 A. Yes.

9 Q. Is that correct?

10 A. Yes.

11 Q. You earlier indicated that phosphorus
12 trichloride and nonyl phenol were the raw
13 materials?

14 A. Yes.

15 Q. Is the PCl_3 , the phosphorus trichloride?

16 A. Yes.

17 Q. Let me ask you about the Vikoflex; what
18 is Vikoflex?

19 A. That's a trade name for an epoxidized
20 soybean oil. It was an additive that was added to
21 the product.

22 Q. Let me turn to the "Remarks" under -- for
23 this product, it says, "Operated 1965 to present."
24 Can you confirm that those are the appropriate

1 dates?

2 A. I can confirm it was done through '76,
3 certainly, and probably through '83.

4 Q. Let me refer you to the next product,
5 polymeric phosphite?

6 A. Yes?

7 Q. I don't believe you testified about this
8 previously; is that correct?

9 A. Yes, I said that it was a second cousin
10 to TNPP. The Wytox 345 was mentioned along with
11 the 312. It was a polymer form of trisnonylphenyl
12 phosphite.

13 Q. Looking at the "Raw materials" column,
14 can you confirm that those are the -- those were
15 the raw materials for this product?

16 A. Yes.

17 Q. Were there any others that you're aware
18 of?

19 A. No.

20 Q. What about the waste by-products?

21 A. The HCl was scrubbed in water and sold
22 outside.

23 Q. Let me refer you to the next five
24 products which are all listed as Actafoam, and

1 then various -- appears to be various forms of
2 Actafoam. What was Actafoam?

3 A. This was an activator that was developed
4 for the foaming agents for the azodicarbonamide.
5 It caused the azodicarbonamide to give off
6 nitrogen at a lower temperature so you could
7 process certain low melting plastics.

8 Q. Could you refer to the "Raw material"
9 column for each of these five products and tell me
10 whether or not you think it's accurate?

11 A. Actafoam R-3 was the main product.

12 Q. Is that the first one listed?

13 A. Yes. That looks all right.

14 Q. What is DOP?

15 A. That's refers to dioctyl- -- di, D I - 2
16 - E T H Y L, second word, H E X Y L, third word,
17 P H T H A L A T E.

18 Q. What is potassium oleate?

19 A. Potassium oleate is a neutralized fatty
20 acid, which we commonly refer to as a soap.

21 Q. The next column lists the by-product
22 waste as, "Element from polishing filter." What
23 does that mean to you?

24 A. I have no idea.

1 Q. Can you tell me what the waste or
2 by-products were with respect to this product?

3 A. There weren't any wastes. This was
4 simply a blend of material.

5 Q. No waste product?

6 A. No.

7 Q. Is that true for all of the Actafoam
8 products listed -- all five, that is?

9 A. That's true for the R-5 and it was true
10 for the XR-34.

11 Q. What about the R-1?

12 A. The R-1 -- that was a blend, also. It
13 was a blend.

14 Q. Under Actafoam R-5?

15 A. Excuse me. I take that back. There was
16 a reaction on the first one. The zinc oxide
17 reacted with the 2-ethylhexoic acid to form a zinc
18 ethyl hexoate, so that was a reaction.

19 Q. Was the zinc ethyl hexoate a by-product
20 or a waste?

21 A. No. That's the main constituent.

22 Q. That's the Actafoam?

23 A. Yes. And that would be true also of the
24 R-5, there was a reaction there between the zinc

1 oxide and cadmium oxide with the ETH.

2 Q. What is the ETH?

3 A. That's the 2-ethylhexoic acid.

4 Q. That's an abbreviation for what is shown
5 above?

6 A. Yes.

7 I might say these all drop down in smaller
8 quantities, these products. They were not
9 millions of pounds by any means.

10 Q. During what period did the Wilmington
11 plant produce these Actafoam products? This
12 memorandum was written in 1983?

13 A. It says that Actafoam was made from 1963
14 to the present. That's probably right. And it
15 said the others were discontinued.

16 Q. Do you know when they were discontinued?

17 A. No, I don't. They were experimental-type
18 new products that obviously didn't make it.

19 Q. Let me refer you to the product marked as
20 "k)," hydrazine --

21 A. Hydrazine.

22 Q. -- on Page 2?

23 A. Yes?

24 Q. Is this a product that you testified

1 concerning previously?

2 A. Yes, that's one of the raw materials for
3 producing azodicarbonamide.

4 Q. Is it also a product? It's listed here
5 as an end product?

6 A. Well, at one period the hydrazine was
7 made on site from urea, chlorine, caustic and
8 sulfuric acid, from 1963 to 1970.

9 Q. And then you used the hydrazine to
10 produce your product?

11 A. That's right. This was a patented
12 process which was my patented process.

13 Q. Your own patent?

14 A. Yes.

15 Q. So you can certainly tell me what the
16 waste products were?

17 A. Yes.

18 Q. Are those correct?

19 A. Those are right. Very good. He's got
20 them right.

21 Q. Were you responsible for the patents for
22 any of these other products?

23 A. The Actafoam was under patent. Actafoam
24 R-1, that was a product I developed and patented.

1 Q. You personally did?

2 A. Yes.

3 Q. Any other products on there?

4 A. I had patents on the tris nonylphenyl
5 phosphite for certain applications.

6 Q. Let's turn to the next product. I'm
7 having a little trouble reading it, it says,
8 "plasticizer dispersions" and then, "Sampore" or
9 "Kempore?"

10 A. It's probably Kempore.

11 Q. Was that also a product of the Wilmington
12 plant?

13 A. Yes. These were simple mixtures of the
14 Kempore with the di-(2-ethyl-hexyl)phthalate.

15 Q. So this did not have a waste stream?

16 A. No. It was blended together. It was
17 another way of selling the Kempore, the
18 azodicarbonamide. A convenience to the customer
19 to put it into the plasticizer.

20 Q. The next product is the dioctyl
21 diphenylamine?

22 A. Yes.

23 Q. I believe you testified concerning this
24 previously; is that correct?

1 A. I started to and then I wasn't sure of
2 the timing, if you remember. You were slanting
3 your questions at '68, and I wasn't sure if it was
4 still being made.

5 Q. If you look over to the right under
6 "Remarks," it says, "Operated 1962 to 1971." Does
7 that refresh your recollection concerning --

8 A. That could be right, yes. I couldn't
9 disagree with that.

10 Q. Are these the proper raw materials
11 listed?

12 A. Yes.

13 Q. Let me turn to the by-products, waste.
14 What is, DIB?

15 A. That's diisobutylene.

16 Q. Was that a waste product?

17 A. No. That's a by-product. It was
18 recovered and used again.

19 Q. Would any of it have been contained in
20 the effluent going into the wastewater treatment
21 plant?

22 A. No, because it was all distilled out of
23 the process stream.

24 Q. What is DODPA?

1 A. DODPA, that's dioctyl diphenylamine.
2 That's the compound over on the left.

3 Q. Why would that be referred to as a
4 by-product?

5 A. I don't know. I don't understand that.

6 Q. How about aluminum hydroxide and sodium
7 chloride?

8 A. Aluminum hydroxide and sodium chloride
9 would have been in the waste stream from this
10 process.

11 Q. The next one, 4,4'
12 oxybisbenzenesulfonylhydrazide?

13 A. You can call it OBSH.

14 Q. I'll be happy to call it that.

15 I believe you testified concerning this
16 previously?

17 A. Yes.

18 Q. Ammonium hydroxide is listed here as a
19 raw material, and I don't believe you mentioned
20 that previously. Was that, in fact, a raw
21 material?

22 A. No, that wasn't used.

23 Q. You think that's an error?

24 A. I think it is.

1 Q. In terms of the waste products, you had
2 mentioned previously sodium chloride, sodium
3 sulfate and sulfuric acid. I see the sulfuric
4 acid, but I don't see the sodium sulfate or sodium
5 chloride?

6 A. They should be there.

7 Q. They should be there?

8 A. Yes.

9 Q. And this mentions hydrochloric acid and
10 you hadn't mentioned that previously?

11 A. Yes.

12 Q. Is that correct, was hydrochloric acid
13 one of the by-products?

14 A. Yes; but then it was neutralized to
15 sodium chloride with caustic. So that ammonium
16 hydroxide should be sodium hydroxide.

17 Q. Under "Remarks," it says, "Operated 1969
18 - 1974." Is that accurate?

19 A. That's about the right time frame.

20 Q. Was this one of the products where the
21 effluent was being sent into the wastewater
22 treatment plant?

23 A. When the wastewater treatment plant was
24 built?

1 Q. Yes.

2 A. Right.

3 Q. So this waste stream was mixed with the
4 other waste stream that you talked about
5 previously?

6 A. Yes.

7 Q. The next product I cannot read, it
8 says --

9 A. That says, down it says, Expandex 5 PT.
10 Up above --

11 Q. Tetrazo- --

12 A. Tetrazol -- phenyltetrazol; 5
13 phenyltetrazol.

14 Q. Was that one of the products at the
15 Wilmington plant?

16 A. It was made in a pilot operation, a small
17 operation.

18 Q. When was that operation started?

19 A. In the seventies.

20 Q. Do you know when in the seventies?

21 A. Sometime in the early seventies.

22 Q. Do you know when it ceased?

23 A. Well, this is '83; I can't be sure of
24 that.

1 Q. What was this product? What was the
2 purpose of it?

3 A. It was a high temperature foaming agent
4 for plastics -- for foaming plastics that had very
5 high melting indices.

6 Q. Did the effluent from this processing go
7 into the wastewater treatment plant during the
8 time that the wastewater treatment plant was in
9 operation?

10 A. I think it did.

11 Q. Let me refer you to the "Raw material"
12 column. Does that appear to be correct?

13 A. Yes.

14 Q. How about the "By-products/Waste?"

15 A. There wouldn't have been benzonitrile in
16 the waste, or dimethyl formamide wouldn't have
17 been in the waste.

18 Q. Which ones, the benz- --

19 A. Benzonitrile and the dimethyl formamide.

20 Q. Why wouldn't they have been in the waste?

21 A. Because the benzonitrile was converted
22 into the product. That's the main raw material.
23 And that was -- would have all been converted into
24 the 5 phenyltetrazol and filtered out.

1 Q. Would there have been any trace amounts
2 left in the effluent?

3 A. I doubt it. This stuff sold at \$15 a
4 pound, so I don't think any of it was left behind,
5 even in trace amounts.

6 Q. The next product is
7 N-nitrosodiphenylamine?

8 A. Yes.

9 Q. I don't believe you've testified to that?

10 A. This was made over a very short period,
11 as you can see, '65 to '67. That was not a big
12 period in twenty-six years, thirty years at
13 Wilmington.

14 Q. Do the years '65 to '67 appear to be
15 correct?

16 A. Yes.

17 Q. Are the raw materials listed, the raw
18 materials that were used?

19 A. Yes.

20 Q. What about the by-products?

21 A. I wouldn't agree that the sodium nitrite.
22 Sodium nitrite wouldn't reach the treatment plant.

23 Again, if you're talking coming right out
24 of the process or at the treatment plant, you

1 wouldn't have sodium nitrite at the treatment
2 plant --

3 Q. How about -- I'm sorry?

4 A. It would be reacted off by the sulfuric
5 acid to sodium sulfate.

6 Q. How about the N-nitrosodiphenylamine?

7 A. That would be filtered off. That
8 wouldn't be in the stream.

9 Q. That was N-nitrosodiphenylamine?

10 A. N-nitrosodiphenylamine.

11 Q. The products listed next are
12 phenol/formaldehyde and urea/formaldehyde resins?

13 A. Right.

14 Q. Is it correct that there were no waste
15 by-products?

16 A. There were by-products. This was back
17 prior to the treatment plant, and there were
18 by-products.

19 Q. Is that correct that cashew nut shells
20 were one of the raw materials?

21 A. Cashew nut shell liquid, yes.

22 Q. Can you tell what the next product is, it
23 says, RIA?

24 A. It's urea; that says "urea, ground" on

1 top. Urea, ground. "RIA, NC," and then, "CS,
2 66."

3 Q. What is urea used for?

4 A. Urea was ground up with a very small
5 amount of processing oil and it was used as an
6 activator for Product No. 1 in rubber compounding.

7 Q. Is it correct that there were no waste
8 products?

9 A. Yes.

10 Q. How about for the "phthalic anhydride,
11 ground?"

12 A. No. That was just a grinding operation
13 where the material was fed into a grinding
14 machine, and there was a large air relief bag for
15 picking up the dust.

16 Q. The next one appears to be,
17 "dioctylphthalate, dibutylphthalate?"

18 A. Right.

19 Q. Was this only produced from 1955 to 1961?

20 A. Yes.

21 Q. I'm not going to ask you about it.

22 A. Okay.

23 Q. The next product is "Wytex PAP,"
24 something "hindered phenol." Can you read --

1 A. I can't read the first word. Oh, yes,
2 polymeric hindered phenol.

3 Q. Was that one of the products that the
4 Wilmington plant produced?

5 A. Yes. This is another condensation
6 product from dinonyl phenol, nonyl phenol with
7 paraformaldehyde.

8 Q. What's the PTSA?

9 A. That's the catalyst; para-toluenesulfonic
10 acid, P A R A, T O L U E N E S U L F O N I C,
11 acid.

12 Q. The next three products all list as
13 by-products, "Element from polishing filter." Can
14 you tell me what that is?

15 MS. BECK: Objection.

16 Asked and answered.

17 Q. Actually, it's that one and the next two.

18 I believe for another product you said you
19 didn't know what the "element from polishing
20 filter" was. I'm asking you whether it makes any
21 sense for this product?

22 A. Yes. This was a bag filter that was used
23 to clarify a product, take out any specks in it.
24 It's a bag that fits in a cylinder and you just

1 pump the liquid through it and it will pick up --
2 it will clarify any materials that may have a few
3 specks in it.

4 Q. What would the filter pick up -- what
5 type of substances?

6 A. Dust. Any dust, rust, or anything that
7 fell into the reactant during the processing.

8 Q. Would it be soaked with the solution
9 after it was removed from the process?

10 A. Yes, it would be.

11 Q. Do you know how the Wilmington plant
12 disposed of these filters?

13 A. I have no idea.

14 Q. Do you know whether they would have been
15 thrown into the regular trash?

16 A. I have no idea.

17 Q. Would the filters have contained all of
18 the raw materials --

19 A. No, just the finished product.

20 Q. Just the finished product?

21 A. Yes. These were cloth filters, so they
22 would retain very little liquid. Very fine.

23 Q. For the first of these Wytox products it
24 says, "Operated 1971 - present." Is that correct;

1 present being 1983?

2 A. '71 is about the start. And I can
3 testify that it was being done in '76.

4 Q. How about the next one, "Wytox PDA?"

5 A. That's an extension of the other product,
6 the Wytox PAP that we already talked about above.

7 Q. Do you know when that was manufactured --
8 the first time that was manufactured by the
9 Wilmington plant?

10 A. Somewhere in the seventies.

11 Again, some of these were market
12 development items where we -- these products were
13 made, put into drums and put in the warehouse, and
14 some of these were never developed and never sold.
15 And so, they were hanging around at the end of the
16 Stepan era. These were developmental products, a
17 lot of them.

18 Q. What do you mean when you say they were,
19 "hanging around at the end of the Stepan era?"

20 A. The product was made. It was in
21 specifications. It was put in the warehouse and
22 it never sold. And not having sold any, sales
23 probably decided to not -- not to pursue selling
24 this product any more. They had taken it off

1 their list. So you would have fifty or sixty
2 drums of this product in the warehouse. And it's
3 like the things in your cellar, nobody does
4 anything until you have to move, and so then, you
5 dispose of those products because when you sell a
6 company, a sharp company coming in will only buy
7 good inventory.

8 So I'm selling -- I can't really sell an
9 obsolete product to a sharp company coming in.
10 They wouldn't buy it. They'll only buy good
11 inventory. So now, my sins come to me, and I have
12 to make some arrangements and get rid of these
13 products, and this is what I think a lot of the
14 drums that were talked about as being shipped out
15 at the end of the Stepan era.

16 Does that make sense -- that description?

17 Q. You think those were finished products
18 that were never sold?

19 A. A lot of them were.

20 MR. FREDERICO: I'll move to strike
21 for lack of foundation.

22 Q. Let me turn next to the -- alkaryl
23 phosphite?

24 A. Alkaryl phosphite. These were never

1 made. These were research products.

2 Q. Were they produced in small volumes?

3 A. In the pilot plant only.

4 Q. Was the pilot plant located at the
5 Wilmington facility?

6 A. Yes.

7 Q. How big was the warehouse where these
8 drums were stored?

9 MS. BECK: Objection.

10 What drums?

11 Q. Let me rephrase that.

12 You testified earlier that certain finished
13 products were stored in drums at the Wilmington
14 plant; is that correct?

15 A. Yes.

16 Q. Where were they stored?

17 A. In the warehouse.

18 Q. How large was the warehouse?

19 A. Fairly large.

20 Q. Can you tell me how many drums were
21 generally stored in the warehouse?

22 MS. BECK: Objection.

23 A. As an estimate, probably five or six
24 thousand.

1 Q. Five or six thousand?

2 A. Yes.

3 Q. So it was a large warehouse?

4 A. Yes.

5 Q. Were all of these drums finished product?

6 MS. BECK: Objection.

7 A. Yes.

8 Q. So is it your testimony that none of
9 these drums represented waste product?

10 A. As far as I know.

11 Q. Is it your testimony that all of these
12 drums contained product that was at least
13 originally intended to be sold?

14 A. That is correct.

15 Q. The next four products are, "modified azo
16 products, Actafoam F-2 powder, Actafoam F-2 paste
17 and Polycone 1000."

18 Is it correct that none of these products
19 had any by-products?

20 A. Yes. They were mixtures of the standard
21 main products.

22 MR. FRANKEL: It's getting close to
23 4:00 o'clock, but the next exhibit only has six
24 products listed on it.

1 (Exhibit 19 marked for
2 identification).

3 Q. (Hanging).

4 A. (Witness peruses document).

5 MR. FRANKEL: Before we turn to this
6 exhibit, could I ask you to refer again to Exhibit
7 1, which is the 30(b)(6) notice of deposition.

8 Q. Let me first ask you if you've seen this
9 document before, the 30(b)(6) notice of
10 deposition?

11 A. (Witness peruses document).

12 Yes, I have.

13 Q. Did you review the subject categories in
14 this notice prior to your deposition today?

15 A. I looked through it.

16 Q. In connection with the preparation for
17 your deposition, did you confer with other Stepan
18 employees concerning any of these subject matters?

19 A. No.

20 Q. Let me refer you specifically to Number 5
21 on Page 4 which refers to, "All instances in which
22 Stepan arranged by contract, agreement, or
23 otherwise for the removal, transport, consignment
24 or delivery of any chemical waste at the Charles

1 George Landfill (or by the Charles George Trucking
2 Company) including, without limitation, the
3 chemical content of such chemical waste and the
4 manufacturing processes used to produce such
5 waste."

6 Did you confer with anyone else at Stepan
7 concerning that subject matter?

8 MS. BECK: Other than attorneys?

9 MR. FRANKEL: Other than attorneys.

10 A. No.

11 Q. Did you understand that you would be
12 testifying today concerning any matters known to
13 Stepan or reasonably available to Stepan
14 concerning this subject matter?

15 A. I don't understand that question.

16 Q. Let me rephrase it.

17 Did you understand that in connection with
18 your testimony here today, that you would be
19 speaking on behalf of Stepan Company?

20 A. Yes.

21 Q. Did you understand that in speaking on
22 behalf of Stepan Company, you would be required to
23 be familiar with any matters known to Stepan
24 Company or reasonably available to Stepan Company?

1 MS. BECK: Well, matters identified
2 in the 30(b)(6) deposition notice?

3 MR. FRANKEL: Exactly.

4 Q. Matters listed in this 30(b)(6) notice,
5 as distinguished from your own personal knowledge
6 prior to receiving this deposition notice.

7 A. I'm still not sure I understand your
8 question.

9 MS. BECK: Neither do I.
10 I'll object to the question.

11 Q. What is it that you don't understand
12 about my question?

13 A. I don't know what you're asking for.

14 Q. In preparation for this deposition, did
15 you go and speak with other Stepan employees in
16 order to determine whether they had information
17 concerning Subject 5?

18 A. No. Simply because there aren't any
19 Stepan employees surviving in Chicago that go back
20 to this era. The people are gone.

21 Q. So is it your testimony that there were
22 no other employees at Stepan -- there are no other
23 employees at Stepan who have knowledge concerning
24 the subject matter 5?

1 A. Absolutely.

2 Q. What about Anthony Green?

3 A. Anthony Green is a purchasing agent. He
4 was not familiar with plant processes, plant
5 operations. He was an office-based purchasing
6 agent.

7 Q. Based upon the documents that we've seen
8 today, it appears that Anthony Green communicated
9 with the Charles George Trucking Company
10 concerning waste disposal. Do you know whether or
11 not that was, in fact, the case?

12 MS. BECK: Objection.

13 On one occasion there was one letter.

14 Object to your characterization.

15 MR. COSBY: Objection.

16 MR. FRANKEL: I believe he's
17 mentioned on several letters.

18 MS. BECK: Anybody can write me a
19 letter. You know there is one letter authored by
20 Anthony Green.

21 BY: MR. FRANKEL:

22 Q. Then is your testimony today based upon
23 your own recollections, based upon your experience
24 with the Stepan Company?

1 A. Absolutely. I have no other reference.

2 Q. How many of the employees presently at
3 Stepan also worked at the Wilmington plant with
4 you?

5 A. At Stepan Chicago?

6 Q. Anywhere at Stepan.

7 A. One.

8 Q. Who was that person?

9 A. Anthony Green.

10 Q. It's your testimony that the only Stepan
11 employee at this time -- that there are only two
12 Stepan employees at this time that worked at the
13 Wilmington plant -- yourself and Mr. Green?

14 A. That's right.

15 Q. Let me refer you to Subjects 2 and 3 in
16 the notice. Subject 2 is, "All instances in which
17 Stepan arranged by contract, agreement, or
18 otherwise for the removal, transport, consignment
19 or delivery of any substance that was or may have
20 been taken to the Charles George Landfill."

21 MS. BECK: Mr. Frankel, I think
22 you're wasting all of our time. You've asked him
23 if anybody else knows any information. He's
24 identified one other employee in Florida who may

1 have some information by virtue of a letter that
2 he wrote, and he has not been designated by
3 Stepan. So I really object to your pursuing this
4 time-wasting line of inquiry.

5 MR. FRANKEL: I don't think I've
6 taken up much time today with this line of
7 inquiry.

8 MS. BECK: We've been over the same
9 materials time and time again. I've courteously
10 not asked you to move on on areas you've covered
11 more than once.

12 MR. FRANKEL: I just have a couple
13 of questions concerning these two subject matters.
14 BY: MR. FRANKEL:

15 Q. Subject matter 3 refers to -- similar to
16 Number 2 -- but it refers to removal, transport,
17 consignment or delivery of any substance by the
18 Charles George Trucking Company.

19 I wanted to ask Mr. Riley whether or not
20 Mr. Green would have knowledge concerning these
21 subject matters?

22 MS. BECK: Objection.

23 MR. COSBY: Objection.

24 A. I can't answer for Mr. Green.

1 Q. You just don't know?

2 A. I can't answer.

3 Q. I hand you Exhibit 19 (handing).

4 The first product listed here is De-Tac
5 NP-27?

6 A. Yes.

7 Q. Was that one of the products of the
8 Wilmington plant?

9 A. For a while it was a development product.
10 It was a blend of simple substances.

11 Q. On the right it says, "Source - G. Mor,"
12 M O R. Was that Mr. Morris?

13 A. That's -- Mr. Morris? It might be Mr.
14 Morris. There was a Morris that worked in the
15 laboratory.

16 Q. Who is Mr. Morris?

17 A. He was a technician in the laboratory.

18 Q. Do you know where he is now?

19 A. I have no idea.

20 Q. Were there any by-products for this
21 product?

22 A. No.

23 Q. What about the next product, the
24 dilaurylthiopropionate?

1 A. That was a research project. That never
2 became a regular product.

3 Q. Lauryl alcohol, was that the only
4 by-product?

5 A. I've got to think about that.

6 This was a small research laboratory
7 operation. This never got to be a product.

8 Q. Can you tell me the time period this was
9 produced?

10 A. Mid-sixties, early seventies, but it was
11 never even produced. It was worked on.

12 Q. How about the next product, the
13 Poly-Sperse AP-2?

14 A. That is a real dog.

15 Q. I'm sorry?

16 A. That's an old dog. That's going back to
17 1953.

18 Q. When was that discontinued?

19 A. Oh, some time in the early sixties.

20 Q. I won't ask you questions about that.

21 A. That's a real dog.

22 Q. Barium azocarbonate?

23 A. Yes.

24 Q. When was that produced?

1 A. From the early sixties until the late
2 sixties -- mid-sixties.

3 Q. Was it produced after the purchase of
4 National Polychemicals by Stepan Company?

5 A. I don't believe so. I don't think it
6 was.

7 Q. What's the acetone filtrate?

8 A. I think it was made in acetone.

9 Q. I'm sorry, it was what?

10 A. It was made in an acetone solution and
11 the product precipitated in the acetone and was
12 filtered and then the acetone was reused.

13 Q. And how about the TNT (2-MT)?

14 A. That's a dog. 2,2-mercapto thiazoline;
15 2,2-mercapto, M E R C A P T O, second word,
16 T H I A Z O L I N E.

17 MR. FRANKEL: I believe it's after
18 4:00 o'clock, and counsel for Stepan had indicated
19 that she wanted to stop the deposition at 4:00
20 o'clock.

21 MS. BECK: Are you finished with
22 Exhibit 19?

23 MR. FRANKEL: Yes.

24 Could we set a date now to resume the

1 deposition?

2 MS. BECK: I can't set a date until
3 I find out what my trial schedule is, and the
4 clerk doesn't know who the judge is going to be.

5 MR. FRANKEL: We'll talk about that
6 over the next week or so.

7 MS. BECK: The judge won't be
8 identified until July 1.

9 Off the record.

10 (Discussion off the record).

11 (At 4:10 p.m. the deposition was
12 suspended).

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CERTIFICATE

I, Charles P. Riley, Jr., do hereby
certify that I have read the foregoing
transcript of my testimony taken on
June 29, 1990, and further certify that said
transcript is a true and accurate record of
said testimony.

Dated on this 24 day of
July, 1990.

Charles P. Riley, Jr.
CHARLES P. RILEY, JR.

Signed under the pains
and penalties of perjury.

1 CERTIFICATE

2 Commonwealth of Massachusetts

3 Middlesex, ss.

4 I, Deborah L. Fitzpatrick, Registered
5 Professional Reporter/Certified Shorthand
6 Reporter, and Notary Public in and for the
7 Commonwealth of Massachusetts, do hereby
8 certify:

9 That Charles P. Riley, Jr., the
10 witness whose deposition is hereinbefore set
11 forth, was duly sworn by me and that such
12 deposition is a true record of the testimony
13 given by said witness.

14 IN WITNESS WHEREOF, I have hereunto
15 set my hand and Notarial seal this 5th day
16 of July, 1990.

17
18
19 
20 CSR/RPR and Notary Public

21 THE FOREGOING CERTIFICATION OF
22 THIS TRANSCRIPT DOES NOT APPLY
23 TO ANY REPRODUCTION OF THE SAME
24 BY ANY MEANS UNLESS UNDER THE
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